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=> d stat que
L1                STR
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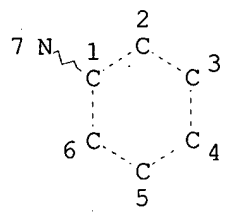


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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   7

STEREO ATTRIBUTES: NONE
L6                SCR 2043
L9         149792 SEA FILE=REGISTRY SSS FUL L1 AND L6
L10        102416 SEA FILE=HCAPLUS L9
L14        221026 SEA FILE=HCAPLUS INHIBIT? (L) (?CANCER? OR ?CARCIN? OR
                  ?NEOPLAS? OR ?TUMOR? OR ?TUMOUR? OR ?SARCOM? OR ?LYMPHOM? OR
                  ?MELANO? OR ?LEUKEM? OR ?METAST?)
L17           540 SEA FILE=HCAPLUS L10(L)INHIBIT?
L20            59 SEA FILE=HCAPLUS L17 AND L14


=> d ibib abs hitrn 120 1-59
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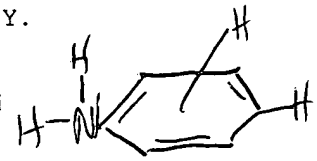
L20 ANSWER 1 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:711384 HCAPLUS
DOCUMENT NUMBER: 137:232459
TITLE: Preparation of multioligoanilinated fullerenes as photodynamic therapeutic agents to **inhibit tumor** growth
INVENTOR(S): Chiang, Long Y.
PATENT ASSIGNEE(S): Taiwan
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6452037	B1	20020917	US 2001-840323	20010423
EP 1253139	A2	20021030	EP 2002-9029	20020423

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRIORITY APPLN. INFO.: US 2001-840323 A 20010423
OTHER SOURCE(S): MARPAT 137:232459

AB Multioligoanilinated fullerenes (MOAFs) of the formula SpF1[C[CO[GF2(Tq)]b(AaK)c]n]m [I; wherein p and q = independently 0-20; a = 1-8; b = 0-1; c = 1-20; provided that when b = 0, then c = 1; n = 1-2; m = 1-20; F1 and F2 = independently a C60-66 or C70 fullerene; S and T = independently OH, NH2, NHR, or SH; R = alkyl; A = independently N-(un)substituted oligoaniline of 2-12 aniline units; K = independently H, (NX-C6H4)1-3NH2, (NX-C6H4)1-3NHCS2H, (NX-C6H4)1-3N:CHArSH, or (NX-C6H4)1-3NHCOArSH; X = H, Z, CH2CO2H, CH2CO2Z, CH2COSZ, CH2CONH2, CH2CONHZ; Ar = aryl; Z = ED; E = R, RAr, ArR, or Ar; D = OH, SH, NH2, NHOH, SO3H, OSO3H, CO2H, CONH2, CHNH2CO2H, PO3H2, OPO3H2, glycoside, CH2OH, etc; G = independently OB, RO, NHBRNH, OBRNH, NHBRO, OBRS, or NHBRS; B = independently alkyl, aryl, (poly)ether, (poly)ester, amide, etc.] were prepd. and tested for use as anti-tumor agents. For example, fullerene deca(hexadecaaniline) adduct in DMF was treated sequentially with either DBU and 1,4-butane sultone or with NaH and 1,4-butane sultone to give the sulfobutylated deca(hexadecaaanilino) adduct of fullerene (F10A16S). The latter exhibited maximal photodynamic cytotoxicity efficacy of > 90% at a concn. of 5.0-10.0 .mu.M and an irradn. time of 60 min against fibrosarcoma CCRC 60037 and sarcoma 180 cells. In the absence of light irradn., no cytotoxicity was obsd. even at the highest F10A16S concn., i.e. 10 .mu.M. In a photodynamic therapy study, the fibrosarcoma tumor wt. in male ICR mice was reduced nearly 99% after i.p. injection of F10A16S at a concn. of 10 mg/kg followed by laser irradn. at 633 nm. Also disclosed are pharmaceutical compns. contg. a pharmaceutically effective amt. of I.

IT **25233-30-1DP**, Aniline, homopolymer, reaction products with the diethylmalonate monoadduct of C60, sulfobutylated
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(oligomeric; prepn. of multioligoanilinated fullerenes as photodynamic therapeutic agents to **inhibit tumor** growth)

IT **25233-30-1**, Aniline, homopolymer
RL: RCT (Reactant); RACT (Reactant or reagent)
(oligomeric; prepn. of multioligoanilinated fullerenes as photodynamic

therapeutic agents to **inhibit tumor** growth)
IT **114464-18-5DP**, Tetraaniline, reaction products with fullerene-60, sulfobutylated
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(prepn. of multioligoanilinated fullerenes as photodynamic therapeutic agents to **inhibit tumor** growth)
IT **114464-18-5**, Tetraaniline
RL: RCT (Reactant); RACT (Reactant or reagent)
(prepn. of multioligoanilinated fullerenes as photodynamic therapeutic agents to **inhibit tumor** growth)
REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 2 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:629162 HCAPLUS
DOCUMENT NUMBER: 137:195162
TITLE: De novo purine synthesis **inhibition** and **antileukemic** effects of mercaptopurine alone or in combination with methotrexate in vivo
AUTHOR(S): Dervieux, Thierry; Brenner, Timothy L.; Hon, Yuen Y.; Zhou, Yinmei; Hancock, Michael L.; Sandlund, John T.; Rivera, Gaston K.; Ribeiro, Raul C.; Boyett, James M.; Pui, Ching-Hon; Relling, Mary V.; Evans, William E.
CORPORATE SOURCE: Department of Pharmaceutical Sciences, Department of Biostatistics, Department of Hematology-Oncology, St Jude Children's Research Hospital, Memphis, TN, 38105, USA
SOURCE: Blood (2002), 100(4), 1240-1247
CODEN: BLOOAW; ISSN: 0006-4971
PUBLISHER: American Society of Hematology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Methotrexate (MTX) and mercaptopurine (MP) are widely used **antileukemic** agents that **inhibit** de novo purine synthesis (DNPS) as a mechanism of their **antileukemic** effects. To elucidate pharmacodynamic differences among children with acute lymphoblastic **leukemia** (ALL), DNPS was measured in **leukemic** blasts from newly diagnosed patients before and after therapy with these agents. Patients were randomized to receive low-dose MTX (LDMTX: 6 oral doses of 30 mg/m2) or high-dose MTX (HDMTX: i.v. 1 g/m2) followed by i.v. MP; or i.v. MP alone (1 g/m2), as initial therapy. At diagnosis, the rate of DNPS in bone marrow **leukemia** cells was 3-fold higher in patients with T-lineage ALL compared with those with B-lineage ALL (769 .+-. 189 vs 250 .+-. 38 fmol/nmol/h; P = .001). DNPS was not consistently **inhibited** following MP alone but was markedly **inhibited** following MTX plus MP (median decrease 3% vs 94%; P < .001). LDMTX plus MP and HDMTX plus MP produced greater **antileukemic** effects (percentage decrease in circulating leukocyte counts) compared with MP alone (-50% .+-. 4%, -56% .+-. 3%, and -20% .+-. 4%, resp.; P < .0001). Full DNPS **inhibition** was assocd. with greater **antileukemic** effects compared with partial or no **inhibition** (-63% .+-. 4% vs -37% .+-. 4%; P < .0001) in patients with non-hyperdiploid B-lineage and T-lineage ALL. HDMTX plus MP yielded 2-fold higher MTX polyglutamate concns. than LDMTX plus MP (2148 .+-. 298 vs 1075 .+-. 114 pmol/109 cells; P < .01) and a higher percentage of patients with full DNPS **inhibition** (78% vs 53%; P < .001). Thus, the extent of DNPS **inhibition** was related to in vivo

antileukemic effects, and a single dose of i.v. MP produced minimal DNPS **inhibition** and **antileukemic** effects, whereas MTX plus MP produced greater **antileukemic** effects and DNPS **inhibition**, with full **inhibition** more frequent after HDMTX.

IT **82334-40-5**, Methotrexate polyglutamate
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(purine synthesis **inhibition** and **antileukemic** effects of mercaptopurine alone or in combination with methotrexate in children with ALL: methotrexate polyglutamate measured in bone marrow aspirates after start of methotrexate)

REFERENCE COUNT: 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 3 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:572427 HCAPLUS
DOCUMENT NUMBER: 136:330425
TITLE: Water-soluble HPMA copolymer-wortmannin conjugate retains phosphoinositide 3-kinase inhibitory activity in vitro and in vivo
AUTHOR(S): Varticovski, L.; Lu, Z.-R.; Mitchell, K.; de Aos, I.; Kopecek, J.
CORPORATE SOURCE: Department of Medicine, TUSM, St. Elizabeth's Medical Center, Boston, MA, 02135, USA
SOURCE: Journal of Controlled Release (2001), 74(1-3), 275-281
CODEN: JCREEC; ISSN: 0168-3659
PUBLISHER: Elsevier Science Ireland Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Phosphoinositide kinases and ATM-related genes play a central role in many physiol. processes. Activation of phosphoinositide 3-kinase (PI 3-kinase) is essential for signal transduction by many growth factors and oncogenes and may contribute to **tumor** progression. In the nanomolar range, Wortmannin (WM), a fungal metabolite, is a potent **inhibitor** of type I PI 3-kinase; it covalently modifies its catalytic subunit. Because WM is sol. only in org. solvents and unstable in water, there are difficulties in its use in vivo. To generate a water-sol. WM deriv., we used a conjugate of N-(2-hydroxypropyl)methacrylamide (HPMA) copolymer and 11-O-desacetylwortmannin (DAWM), which has a slightly lower **inhibitory** activity than WM. We covalently attached DAWM to HPMA copolymer contg. oligopeptide (GFLG) side-chains. The final product had an estd. mol. mass of 20 kDa and contained 2 wt. % of DAWM. The HPMA copolymer (PHPMA)-DAWM conjugate **inhibited** type I PI 3-kinase activity in vitro and growth factor-stimulated activation of Akt in vivo; it possessed approx. 50% of the **inhibitory** activity of DMSO solubilized WM. The specificity and stability of the PHPMA-DAWM conjugate is currently under investigation. The new water-sol. form of WM may be useful in investigations of the role of PI 3-kinase in **tumor** progression and other cellular biol. functions in vivo.

IT **100424-72-4DP**, wortmannin conjugates
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)
(water-sol. methacrylamide copolymer-wortmannin conjugate retains phosphoinositide 3-kinase **inhibitory** activity in vitro and in vivo)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 4 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:561176 HCAPLUS
DOCUMENT NUMBER: 136:189230
TITLE: TAT peptide on the surface of liposomes affords their efficient intracellular delivery even at low temperature and in the presence of metabolic inhibitors
AUTHOR(S): Torchilin, Vladimir P.; Rammohan, Ram; Weissig, Volkmar; Levchenko, Tatyana S.
CORPORATE SOURCE: Department of Pharmaceutical Sciences, Northeastern University, Boston, MA, 02115, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (2001), 98(15), 8786-8791
CODEN: PNASA6; ISSN: 0027-8424
PUBLISHER: National Academy of Sciences
DOCUMENT TYPE: Journal
LANGUAGE: English

AB To achieve an efficient intracellular drug and DNA delivery, attempts were made to target microparticulate drug carriers into cytoplasm bypassing the endocytic pathway. TAT peptides derived from the HIV-1 TAT protein facilitate intracellular delivery of proteins and small colloidal particles. We demonstrated that relatively large drug carriers, such as 200-nm liposomes, can also be delivered into cells by TAT peptide attached to the liposome surface. Liposomes were fluorescently labeled with membranotropic rhodamine-phosphatidylethanolamine or by entrapping FITC-dextran. Incubation of fluorescent TAT liposomes with mouse Lewis lung **carcinoma** cells, human breast **tumor** BT20 cells, and rat cardiac myocyte H9C2 results in intracellular localization of certain liposomes. Steric hindrances for TAT peptide cell interaction (attachment of TAT directly to the liposome surface without spacer or the presence of a high MW polyethylene glycol on the liposome surface) abolish liposome internalization, evidencing the importance of direct contact of TAT peptide with the cell surface. Low temp. or metabolic **inhibitors**, sodium azide or iodoacetamide, have little influence on the translocation of TAT liposomes into cells, confirming the energy-independent character of this process. The approach may have important implications for drug delivery directly into cell cytoplasm.

IT **150673-50-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(ATA peptide on surface of liposomes affords efficient intracellular delivery even at low temp. and in presence of metabolic **inhibitors**)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 5 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:658033 HCAPLUS
DOCUMENT NUMBER: 132:146279
TITLE: Impact of polyglutamation on sensitivity to raltitrexed and methotrexate in relation to drug-induced inhibition of de novo thymidylate and purine biosynthesis in CCRF-CEM cell lines
AUTHOR(S): Barnes, Matthew J.; Estlin, Edward J.; Taylor, Gordon A.; Aherne, G. Wynne; Hardcastle, A.; McGuire, J. J.; Calvete, Joanne A.; Lunec, John; Pearson, Andrew D. J.; Newell, David R.
CORPORATE SOURCE: Cancer Research Unit, University of Newcastle, Newcastle upon Tyne, NE2 4HH, UK
SOURCE: Clinical Cancer Research (1999), 5(9), 2548-2558

CODEN: CCREF4; ISSN: 1078-0432
PUBLISHER: American Association for Cancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The aim of this study was to investigate the influence of folylpolyglutamyl synthetase (FPGS) activity on the cellular pharmacol. of the classical antifolates raltitrexed and methotrexate (MTX) using two human **leukemia** cell lines, CCRF-CEM and CCRF-CEM:RC2Tomudex. Cell growth **inhibition** and drug-induced **inhibition** of de novo thymidylate and purine biosynthesis were used as measures of the cellular effects of the drugs. CCRF-CEM:RC2Tomudex cells had <11% of the FPGS activity of CCRF-CEM cells, whereas MTX uptake and TS activity were equiv. In CCRF-CEM:RC2Tomudex cells, MTX polyglutamate formation was undetectable after exposure to 1 .mu.M [3H]MTX for 24 h. After exposure to 0.1 .mu.M raltitrexed, levels of total intracellular raltitrexed-derived material in CCRF-CEM:RC2Tomudex cells were 30- to 50-fold lower than in the CCRF-CEM cell line. CCRF-CEM:RC2Tomudex cells were >1000-fold resistant to raltitrexed and 6-fold resistant to lometrexol but sensitive to MTX and nolatrexed when exposed to these antifolates for 96 h. After 6 h of exposure, CCRF-CEM cells retained sensitivity to MTX and raltitrexed but were less sensitive to lometrexol-mediated growth **inhibition**. In contrast, CCRF-CEM:RC2Tomudex cells were markedly insensitive to raltitrexed, lometrexol, and to a lesser degree, MTX. Simultaneous measurement of de novo thymidylate and purine biosynthesis revealed 90% **inhibition** of TS activity by 100 nM MTX in both cell lines, whereas **inhibition** of de novo purine synthesis was only obsd. in CCRF-CEM cells, and only after exposure to 1000 nM MTX. Ten nM raltitrexed induced >90% **inhibition** of TS activity in CCRF-CEM cells, whereas in CCRF-CEM:RC2Tomudex cells, there was no evidence of **inhibition** after exposure to 1000 nM raltitrexed. These studies demonstrate that polyglutamation is a crit. determinant of the cellular pharmacol. of both raltitrexed and MTX, markedly influencing potency in the case of raltitrexed and locus of action in the case of MTX.

IT **82334-40-5**, Methotrexate polyglutamate
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(impact of polyglutamation on sensitivity to raltitrexed and methotrexate in relation to drug-induced **inhibition** of de novo thymidylate and purine biosynthesis in CCRF-CEM cell lines)

REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 6 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:565900 HCAPLUS
DOCUMENT NUMBER: 131:194281
TITLE: Conjugated suramin or derivatives thereof with PEG, polyaspartate or polyglutamate for cancer treatment
INVENTOR(S): Webb, Craig P.; Jeffers, Michael E.; Czerwinski, Gregorz; Michejda, Christopher J.; Vande, Woude George F.
PATENT ASSIGNEE(S): The Government of the United States of America, as Represented by the Secret, USA; Vande Woude, George F.
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9943311	A2	19990902	WO 1999-US4336	19990226
WO 9943311	A3	19991014		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

AU 9927954	A1	19990915	AU 1999-27954	19990226
PRIORITY APPLN. INFO.:			US 1998-75994P	P 19980226
			WO 1999-US4336	W 19990226

AB The present invention provides an assay that identifies compds. which **inhibit** cleavage of HGF/SF by serum proteases such as uPA, and methods in which such compds. are provided to reaction solns., to cultured cells in vitro, or to a mammal in vivo, to **inhibit** cleavage of HGF/SF (hepatocyte growth factor/scatter factor) and to **inhibit** chem. and biol. effects resulting from the activation of c-Met receptor by HGF/SF. The invention also provides methods for modifying suramin and suramin-related polysulfonated compds. that **inhibit** HGF/SF cleavage, by attaching PEG or polyanions such as polyglutamate or polyaspartate to the compds. to reduce cellular uptake of the compds., thereby reducing their cytotoxicity. Also provided are a pharmaceutical compn. contg. at least one polysulfonated HGF/SF cleavage-**inhibiting** compd. other than suramin, and a pharmaceutical compn. contg. at least one HGF/SF cleavage-**inhibiting** form of suramin or a suramin-related polysulfonated compd. that is modified by conjugation to a chem. moiety that reduces uptake of the compd. into cells. The present invention further includes methods wherein such pharmaceutical compns. are administered to a mammal with a **tumor** that is stimulated to grow by HGF/SF, to **inhibit** the growth or **metastasis** of the **tumor** in the mammal.

IT **241483-26-1P**, Suramin PEG ester
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugated suramin or derivs. thereof with PEG or polyaspartate or polyglutamate for **cancer** treatment which **inhibit** cleavage of HGF/SF by serum proteases such as uPA and **inhibit** activation of c-Met receptors)

IT **241483-27-2 241483-28-3 241483-29-4**
241483-30-7 241483-31-8 241483-32-9
241483-33-0 241483-34-1 241483-35-2
241483-36-3 241483-38-5
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(conjugated suramin or derivs. thereof with PEG or polyaspartate or polyglutamate for **cancer** treatment which **inhibit** cleavage of HGF/SF by serum proteases such as uPA and **inhibit** activation of c-Met receptors)

L20 ANSWER 7 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:559437 HCAPLUS
DOCUMENT NUMBER: 131:193912

TITLE: Mechanisms of resistance to methotrexate in childhood acute lymphoblastic **leukemia**. Circumvention of thymidylate synthase **inhibition**
AUTHOR(S): Weigand, M.; Frei, E.; Graf, N.; Buchholz, B.; Wolfrom, C.; Breuer, A.; Wiessler, M.
CORPORATE SOURCE: German Cancer Res. Center, Heidelberg, D-69120, Germany
SOURCE: Journal of Cancer Research and Clinical Oncology (1999), 125(8/9), 513-519
CODEN: JCROD7; ISSN: 0171-5216
PUBLISHER: Springer-Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In view of treatment failures in acute lymphoblastic **leukemia** (ALL) blasts from patients were evaluated for methotrexate (MTX) uptake, formation of long-chain MTX polyglutamates (MTX-Glu5+6), cytotoxicity, and thymidylate synthase **inhibition** by MTX and compared to blasts from patients with acute myelogenous **leukemia** (AML). In most ALL blasts large amts. of MTX-Glu5+6 (1.06-7.03 pmol/107 cells) and high cytotoxicity (43.5-92.7%) were found, while in others small amts. of MTX-Glu5+5 (0.0-0.39 pmol/107 cells) caused only weak cytotoxicity (6.0-27.9%). Resistance to MTX in blasts from AML patients was also caused by reduced synthesis of MTX-Glu5+6 (0.0-0.42 pmol/107 cells). Some ALL blasts were able to survive MTX treatment despite large amts. of MTX-Glu5+6 (1.5-5.05 pmol107 cells) and extensive thymidylate synthase **inhibition**. The authors suggest a resistance mechanism based on the switch of thymidylate synthesis to the salvage pathway.

IT **82334-40-5**, Methotrexate polyglutamate
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(thymidylate synthase **inhibition** of methotrexate in childhood acute lymphoblastic **leukemia**)

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 8 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:245690 HCAPLUS
DOCUMENT NUMBER: 131:73948
TITLE: Synthesis of macromolecular conjugates of a urokinase inhibitor: amiloride
AUTHOR(S): Pato, Janos; Ulbrich, Karel; Subr, Vladimir; Baker, Peter; Mezo, Gabor; Hudecz, Ferenc
CORPORATE SOURCE: Chemical Research Center, Chemical Institute, Budapest, 1525, Hung.
SOURCE: Journal of Bioactive and Compatible Polymers (1999), 14(2), 99-121
CODEN: JBCPEV; ISSN: 0883-9115
PUBLISHER: Technomic Publishing Co., Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Amiloride is a potent **inhibitor** of a urokinase type plasminogen activator which is involved in the invasive process of **cancer** cells leading to the initiation of **metastasis**. Synthesis, characterization and in vitro tests of four macromol. conjugates of Amiloride are presented. One of them is a degradable deriv., HPMA-Gly-D,L-Phe-Leu-Gly-amiloride. In this case the in vitro release of Amiloride was monitored. Other conjugates are stable contg. a new amiloride deriv., 6-aminohexyl amiloride [AHA], coupled to different polymeric carriers: a branched polypeptide, poly-[Lys(AcGlu1.0-D,L-

Ala4.5)] [AcEAK], poly-[N-(2-hydroxy propyl) methacrylamide] [HPMA] and poly-[1-vinyl-2-pyrrolidone-co-maleic acid] [NVP MA]. **Inhibition** of uPA, plasminogen activation and proteinases secreted by **cancer** cells was measured as well as basement membrane degrdn. in vitro. Each amiloride AHA and the corresponding conjugates retained their activity in these expts.

IT **57950-81-9P 228705-67-7P 228705-68-8P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and reaction of in the synthesis of macromol. conjugates of the urokinase **inhibitor** amiloride)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L20 ANSWER 9 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:292155 HCAPLUS
DOCUMENT NUMBER: 129:62537
TITLE: The effects of combined antifolates on **inhibition** of growth of murine **leukemia** cells cultured in vitro
AUTHOR(S): Balinska, Malgorzata; Szablewska, Irmina; Janiszewska, Dorota; Bartuzi, Katarzyna; Pawelczak, Krzysztof
CORPORATE SOURCE: M. Nencki Institute of Experimental Biology, Polish Academy of Sciences, Warsaw, 02-093, Pol.
SOURCE: Acta Biochimica Polonica (1997), 44(4), 743-750
CODEN: ABPLAF; ISSN: 0001-527X
PUBLISHER: Polish Biochemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The synergistic effect of trimetrexate (TMTX) and sulfonamide derivs. of quinazoline on cultured 5178Y murine **leukemia** cells was examd. On exposure to slightly **inhibitory** concns. of TMTX (0.1 nM) in combination with 2-desamino-2-methyl-10-propargyl-5,8-dideaza-pteroyl-sulfoglycine (DMPDDSF) (0.02 .mu.M) a synergistic **inhibitory** effect of the antifolates on cell growth was obsd. These two drugs in the same combination also caused synergistic **inhibition** of de novo synthesis of thymidylate in intact cells as measured by tritium release from [5-3H]deoxyuridylate. This was accompanied by a marked redn. in intracellular concn. of 5,10-methylenetetrahydro-pteroyl-polyglutamate (5,10CH2H4PteGlun) (0.2 .mu.M) and dihydropteroyl-polyglutamate (0.12 .mu.M). In these conditions de novo biosynthesis of purine was decreased by 50%. These observations show that growth **inhibition** by combined antifolates is mediated by intracellular depletion of the substrate of thymidylate synthase - 5,10CH2H4PteGlun. The results obtained strongly suggest that under certain conditions **inhibition** of thymidylate synthesis by DMPDDSF is intensified by prior application of TMTX - an **inhibitor** of dihydrofolate reductase.

IT **32108-06-8**
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(effect of combined antifolates on **inhibition** of growth of murine **leukemia** cells in vitro)

L20 ANSWER 10 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:323252 HCAPLUS
DOCUMENT NUMBER: 127:28719
TITLE: .gamma.-Glutamyl hydrolase from human **sarcoma** HT-1080 cells: characterization and **inhibition** by glutamine antagonists

AUTHOR(S): Waltham, Mark C.; Li, Wei-Wei; Gritsman, Helena; Tong, William P.; Bertino, Joseph R.
CORPORATE SOURCE: Program of Molecular Pharmacology and Therapeutics, Memorial Sloan-Kettering Cancer Center, New York, NY, 10021, USA
SOURCE: Molecular Pharmacology (1997), 51(5), 825-832
CODEN: MOPMA3; ISSN: 0026-895X
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Elevated .gamma.-glutamyl hydrolase (GGH) activity as a contributing factor in mechanisms of acquired and intrinsic antifolate resistance has been reported for several cultured cell lines. Despite this, little is known about this enzyme, esp. the human species. Using the human HT-1080 **sarcoma** line, we obsd. the secretion of GGH activity into media during culture (a phenomenon that could be markedly stimulated by exposure to NH4Cl) and an acidic pH optimum for in vitro catalytic activity of the enzyme. These properties are consistent with a lysosomal location for the enzyme. Unlike rodent GGH, prepns. of HT-1080 enzyme (purified .ltoreq.2000-fold) displayed exopeptidase activity in cleaving successive end-terminal .gamma.-glutamyl groups from poly-L-.gamma.-glutamyl derivs. of folate, methotrexate (MTX), and para-aminobenzoic acid substrates and a marked preference for long-chain polyglutamates (Km values for glu4 vs. glu1 derivs. were 17- and 15-fold lower for folate and MTX versions, resp.). Using an in vitro assay screen, several glutamine antagonists [i.e., 6-diazo-5-oxo-norleucine (DON), acivicin, and azaserine] were identified as human GGH **inhibitors**, with DON being the most potent and displaying time-dependent **inhibition**. In cell culture expts., simultaneous exposure of DON (10 .mu.M) and [3H]MTX for 24 h resulted in modest elevations of the long-chain .gamma.-glutamyl derivs. of the antifolate for HT-1080 and another human **sarcoma** line. These compds. may serve as useful lead compds. in the development of specific GGH **inhibitors** for use in examg. the relation between GGH activity and antifolate action and may potentially be used in clin. combination with antifolates that require polyglutamylation for effective cellular retention.

IT **82334-40-5**, Methotrexate polyglutamate
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(.gamma.-Glutamyl hydrolase from human **sarcoma** HT-1080 cells: characterization and **inhibition** by glutamine antagonists and potential role in modulation of antifolate polyglutamylation)

L20 ANSWER 11 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:670065 HCAPLUS
DOCUMENT NUMBER: 125:321415
TITLE: **Inhibition** of murine **leukemia** virus by poly-2'-o-(2,4-dinitrophenyl)- poly (a) (dnp poly (a) , antiviral, reverse transcriptase)
AUTHOR(S): Ashun, Mary Asabea
CORPORATE SOURCE: State Univ. of New York, Buffalo, NY, USA
SOURCE: (1996) 104 pp. Avail.: Univ. Microfilms Int., Order No. DA9634408
From: Diss. Abstr. Int., B 1996, 57(6), 3710
DOCUMENT TYPE: Dissertation
LANGUAGE: English

AB Unavailable

IT **165281-56-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); PRP (Properties); BIOL (Biological study)
(**inhibition** of murine **leukemia** virus by poly-2'-o-(2,4-dinitrophenyl)- poly (a) (dnp poly (a) , antiviral, reverse transcriptase))

L20 ANSWER 12 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:604347 HCAPLUS
DOCUMENT NUMBER: 125:265088
TITLE: **Inhibition** of murine **leukemia** virus with poly-2'-O-(2,4-dinitrophenyl)poly[A]
AUTHOR(S): Ashun, Mary Apea; Hu, Yin; Kang, Insug; Li, Chih C.; Wang, Jui H.
CORPORATE SOURCE: Natural Science Center, State University of New York, Buffalo, NY, 14260-3000, USA
SOURCE: Antimicrobial Agents and Chemotherapy (1996), 40(10), 2311-2317
CODEN: AMACCQ; ISSN: 0066-4804
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Poly-2'-O-(2,4-dinitrophenyl)poly[A] (DNP-poly[A]) is a potent **inhibitor** of reverse transcriptases from a variety of sources (I. Kang and J. H. Wang, J. Biol. Chem. 269:12024-12031, 1994). In the present study, its **inhibitory** effect on the reverse transcriptase (RT) from Moloney murine **leukemia** virus (MuLV) was investigated. DNP-poly[A] was found to enter the virus spontaneously and to completely **inhibit** the RT within 30 min at 0.degree.. The **inhibitor** was also spontaneously transported into isolated human lymphocytes and leukocytes at 37.degree.. Animal studies have demonstrated the effectiveness of DNP-poly[A] as an antiviral drug when administered i.p. at various doses from 1 to 100 mg/kg of body wt. MuLV-infected mice show the presence of RT in their blood as well as increased nos. of leukocytes. After the administration of DNP-poly[A] at a dosage of 100 mg/kg of body wt. three times a week over a 3-wk period, RT could not longer be detected by an ultrasensitive RT-PCR assay. Autopsy showed that the spleens of infected but untreated mice were enlarged 2- to 10-fold, with fused nodules and the proliferation of large abnormal lymphocytes, whereas the spleens of infected but treated mice resembled the normal spleens of uninfected control mice. These observations indicate that further study of DNP-poly[A] as a general antiretroviral agent is desirable.
IT **165281-56-1**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(**inhibition** of murine **leukemia** virus with poly(dinitrophenyl)poly[.alpha.] in relation to bioavailability and reverse transcriptase **inhibition**)

L20 ANSWER 13 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:536513 HCAPLUS
DOCUMENT NUMBER: 125:230702
TITLE: A new hypothesis of **tumorigenesis** induced by biomaterials: **inhibitory** potentials of intercellular communication play an important role on the **tumor**-promotion stage
AUTHOR(S): Tsuchiya, Toshie; Nakamura, Akitada
CORPORATE SOURCE: Div. Med. Devices, Natl. Inst. Health Sci., Tokyo, 158, Japan

SOURCE: Journal of Long-Term Effects of Medical Implants (1995), 5(4), 233-242
CODEN: JLEIEM; ISSN: 1050-6934
PUBLISHER: Begell House
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A possible mechanism of **tumorigenesis** induced by the polyetherurethanes (PEUs) is clarified as follows: the **tumor** -promoting activities of the PEUs were stronger than the initiating activities; the promotion was facilitated by the polyether soft segment moiety such as poly(tetramethylene oxide) (PTMO), resulting in the **inhibition** of the gap-junctional intercellular communication; this **inhibition** was caused by leachable oligomers, degrdn., and direct cell/material interaction. On the basis of our recent studies, we also propose a new hypothesis that **inhibitory** potentials of the intercellular communication play an important role on the **tumor** -promoting stage in various biomaterials.

IT **9018-04-6**, 1,4-Butanediol-4,4'-diphenylmethane diisocyanate-poly(tetramethylene oxide)copolymer
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**inhibitory** action on gap-junctional intercellular communication in **tumorigenesis** induced by biomaterials)

L20 ANSWER 14 OF 59 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1996:530466 HCAPLUS
DOCUMENT NUMBER: 125:212004

TITLE: Combination chemotherapy and photodynamic therapy with N-(2-hydroxypropyl)methacrylamide copolymer-bound **anticancer** drugs **inhibit** human ovarian **carcinoma** heterotransplanted in nude mice

AUTHOR(S): Peterson, C. Matthew; Lu, Jing Ming; Sun, Yongren; Peterson, C. Anthony; Shiah, Jane-Guo; Straight, Richard C.; Kopecek, Jindrich
CORPORATE SOURCE: Dep. Obstetrics Gynecol., Univ. Utah, Salt Lake City, UT, 84132, USA

SOURCE: Cancer Research (1996), 56(17), 3980-3985
CODEN: CNREA8; ISSN: 0008-5472
PUBLISHER: American Association for Cancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English

AB This study characterizes the efficacy and toxicity of (a) free Adriamycin and N-(2-hydroxypropyl)methacrylamide (HPMA) copolymer-Adriamycin conjugate (P-A); (b) free and HPMA copolymer-meso-chlorin e6 monoethylene diamine disodium salt (Mce6) conjugate (P-C) and light-induced photodynamic therapy; and (c) combinations of the HPMA copolymer conjugates (P-A and P-C) in the destruction of human epithelial ovarian carcinoma heterotransplanted in the nude mouse (OVCAR-3). Eight-week-old female nu/nu mice were injected in both flanks with 0.04-0.05 cm3 OVCAR-3 solid tumor dispersed in media. When bilateral tumors reached a min. vol. of 0.18 cm3 (one axis, 2.0-mm min.) and demonstrated consistent growth, the expts. were initiated. Drugs were given i.v. unless otherwise noted. Tumor-bearing mice were allocated to the following protocols: (a) Adriamycin at 1 mg/kg, P-A at 30 mg/kg (2.2 mg/kg Adriamycin equiv.), and controls (n = 6 each); (b) Mce6 and light (2 h after administration; 650 nm light for 15 min to deliver 220 J/cm2) at 1.25, 2.5, 5, and 10 mg/kg (n = 6 each), 2.5 mg/kg i.p. (n = 4), and controls (n = 6); (c) P-C at 12.5, 25, and 75 mg/kg (1.5, 2.9, and 8.7 mg/kg Mce6 equivalent, resp.) with

light (18 h after administration; 650 nm light for 15 min to deliver 220 J/cm2), P-C at 25 mg/kg (2.9 mg/kg Mce6 equivalent) with no light administration, and controls (n = 7 each); and (d) a combination of P-A (30 mg/kg, 2.2 mg/kg Adriamycin equiv.) and P-C (12.5 and 75 mg/kg; 1.5 mg/kg and 8.7 mg/kg Mce6 equivalent, resp.) with and without light (n = 7 each, 18 h after administration; 650 nm light for 15 min to deliver 220 J/cm2) and controls (n = 12). Tumor vols. and animal wts. were assessed for significant differences from the treated and control groups by Student's t test. Adriamycin (1 mg/kg) and P-A (30 mg/kg, 2.2 mg/kg Adriamycin equiv.) caused less than a 10% wt. loss, and treated tumor vols. (day 10-32) were significantly less than those of controls (all $P < 0.045$). Mce6 (2.5-10 mg/kg i.v.), caused tumor regression in 80% of tumors and a shock syndrome in 17-83%. I.p. dosing (2.5 mg/kg) was uniformly fatal. Mce6 at 1.25 mg/kg did not show reproducible efficacy. P-C with light (25 and 75 mg/kg; 2.9 and 8.7 mg/kg Mce6 equivalent, resp.) demonstrated significant tumor destruction ($P < 0.003$) but not complete ablation. The combinations of P-A (30 mg/kg, 2.2 mg/kg Adriamycin equiv.) plus P-C (12.5 and 75 mg/kg; 1.5 mg/kg and 8.7 mg/kg of Mce6 equivalent, resp.) with light resulted in tumor vols. that were significantly less than control tumor vols. and the tumor vol. of mice receiving either P-A (30 mg/kg, 2.2 mg/kg Adriamycin equiv.) or P-C with light (12.5 or 75 mg/kg; 1.5 or 8.7 mg/kg Mce6 equivalent) alone (all $P < 0.02$). P-C (75 mg/kg, 8.7 mg/kg Mce6 equivalent) added to P-A (30 mg/kg, 2.2 mg/kg Adriamycin equiv.) resulted in complete tumor ablation. Free Mce6 demonstrates a narrow margin of safety, which is extended by incorporation into HPMA copolymers. P-A demonstrates safety and efficacy in vivo. The chemotherapy and photodynamic therapy of P-A (30 mg/kg, 2.2 mg/kg Adriamycin equiv.) with P-C and light (12.5 and 75 mg/kg; 1.5 and 8.7 mg/kg Mce6 equivalent, resp.) was nontoxic and allowed us to attain a significant improvement in tumor cures than those obtained by P-A or P-C with light alone.

IT **100424-72-4D**, reactions products with adriamycin and with chlorin e6 monoethylene diamine
RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(chemotherapy-photodynamic therapy combination with (hydroxypropyl)methacrylamide copolymer-bound **anticancer** drugs in **inhibition** of human ovarian **carcinoma** heterotransplanted in nude mice)

L20 ANSWER 15 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:261306 HCAPLUS
DOCUMENT NUMBER: 125:757
TITLE: The **inhibition** of **tumor** growth by topical hyaluronan and diclofenac-sodium in combination (HYAL EX-0001).
AUTHOR(S): Freemantle, C. N.; Seed, M. P.; Brown, J.; Alam, C. A. S.; Asculai, S.; Willoughby, D. A.
CORPORATE SOURCE: Medical College, St Bartholomew's Hospital, London, EC1M 6BQ, UK
SOURCE: Round Table Series - Royal Society of Medicine Press (1995), 40(Third International Workshop on Hyaluronan in Drug Delivery, 1995), 89-97
CODEN: RTMPFO
PUBLISHER: Royal Society of Medicine Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors demonstrate that the topical application of hyaluronan reduces

the development of murine colorectal adenocarcinoma 26 (Colon-26), as well as the tumor vascular vol. and vascular d., while the inclusion of diclofenac accelerates this effect on tumor development and vascularity.

IT **176982-08-4**, HYAL EX-0001
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical hyaluronan and diclofenac-sodium in combination (HYAL EX-0001) **inhibition** of **tumor** growth and vascularity)

L20 ANSWER 16 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:616040 HCAPLUS
DOCUMENT NUMBER: 123:25288
TITLE: Mechanisms of acquired resistance to the quinazoline thymidylate synthase inhibitor ZD1694 (Tomudex) in one mouse and three human cell lines
AUTHOR(S): Jackman, AL; Kelland, LR; Kimbell, R; Brown, M; Gibson, W; Aherne, GW; Hardcastle, A; Boyle, FT
CORPORATE SOURCE: Centre for Cancer Therapeutics, Institute of Cancer Research, Sutton/Surrey, SM2 5NG, UK
SOURCE: British Journal of Cancer (1995), 71(5), 914-24
CODEN: BJCAAI; ISSN: 0007-0920
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Four cell lines, the mouse L1210 **leukemia**, the human W1L2 lymphoblastoid and two human ovarian (CH1 and 41M) cell lines, were made resistant to ZD1694 (Tomudex) by continual exposure to incremental doses of the drug. A 500-fold increase in thymidylate synthase (TS) activity is the primary mechanism of resistance to ZD1694 in the W1L2:RD1694 cell line, which is consequently highly cross-resistant to other folate-based TS **inhibitors**, including BW1843U89, LY231514 and AG337, but sensitive to antifolates with other enzyme targets. The CH1:RD1694 cell line is 14-fold resistant to ZD1694, largely accounted for by the 4.2-fold increase in TS activity. Cross-resistance was obsd. to other TS **inhibitors**, including 5-fluorodeoxyuridine (FdUrd). 41M:RD1694 cells, when exposed to 0.1 .mu.M [3H]ZD1694, accumulated .apprx.20-fold less 3H-labeled material over 24 h than the parental line. Data are consistent with this being the result of impaired transport of the drug via the reduced folate/methotrexate carrier. Resistance was therefore obsd. to methotrexate but not to CB3717, a compd. known to use this transport mechanism poorly. The mouse L1210:RD1694 cell line does not accumulate ZD1694 or methotrexate (MTX) polyglutamates. Folylpolyglutamate synthetase substrate activity (using ZD1694 as the substrate) was decreased to .apprx.13% of that obsd. in the parental line. Cross-resistance was found to those compds. known to be active through polyglutamation.

IT **82334-40-5**, Methotrexate polyglutamate
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(mechanisms of acquired resistance to quinazoline thymidylate synthase **inhibitor** ZD1694 (Tomudex) in **tumor** cell lines and cross resistance to other **antitumor** agents)

L20 ANSWER 17 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1995:211945 HCAPLUS
DOCUMENT NUMBER: 122:38698
TITLE: Inhibition of in vitro calcium phosphate precipitation in presence of polyurethane via surface modification and drug delivery

AUTHOR(S): Chandy, Thomas; Kumar, B. Ajith; Sharma, Chandra P.
CORPORATE SOURCE: Biomedical Technology Wing, Sree Chitra Tirunal Institute Medical Sciences and Technology, Trivandrum, 695012, India
SOURCE: Journal of Applied Biomaterials (1994), 5(3), 245
CODEN: JABIEW; ISSN: 1045-4861
PUBLISHER: Wiley
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Biomaterial assocd. calcification is the principal cause of the clin. failure of bioprosthetic implants. The present investigation describes the mineralization of polymeric substrate in an extracirculatory environment and the possible methods of prevention. Calcification was examd. on various polyurethane films (and bioprosthetic tissue) incubated in **metastable** solns. of calcium phosphate and the role of polymer casting and pptn. was evaluated. The formulation and the in vitro efficacy of prolonged controlled-release chitosan matrixes, contg. the novel anticalcification agents, such as Fe3+ or protamine sulfate (PS), were also attempted. The in vitro release profiles of PS from chitosan beads was performed in a rotating shaker (100 rpm) in 0.1 M phosphate buffer (pH 7.4) and was monitored spectrophotometrically. The amt. and percentage of drug release were much higher initially, which was controlled with the incorporation of egg phosphatidyl choline (EPC). The PS loaded chitosan beads (coincubated in calcium phosphate soln. with the calcifiable polyurethane films) significantly **inhibited** biomaterial calcification (about 40-50% **inhibition**). Surface modification of polyurethanes with Fe3+ or PS also **inhibited** the calcification profile of the material. These findings suggest the possibility of a combination therapy for prevention of biomaterial assocd. calcification via surface modifications in conjunction with long-term controlled release of the anticalcifying drugs.

IT **51231-75-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**inhibition** of in vitro calcium phosphate pptn. in presence of polyurethane via surface modification and drug delivery)

L20 ANSWER 18 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:641370 HCAPLUS
DOCUMENT NUMBER: 119:241370
TITLE: Polymer conjugates for the simultaneous delivery of **neoplasm inhibitor** activatable by enzymes and light.
INVENTOR(S): Kopecek, Jindrich; Krinick, Nancy
PATENT ASSIGNEE(S): University of Utah, USA
SOURCE: PCT Int. Appl., 89 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9314142	A1	19930722	WO 1993-US683	19930121
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5258453	A	19931102	US 1992-822924	19920121
AU 9335930	A1	19930803	AU 1993-35930	19930121

Searched by M. Smith

AU 663167	B2	19950928		
EP 621880	A1	19941102	EP 1993-904633	19930121
EP 621880	B1	19990908		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE				
HU 68082	A2	19950529	HU 1994-2142	19930121
JP 08500327	T2	19960116	JP 1993-512746	19930121
PL 172184	B1	19970829	PL 1993-304685	19930121
AT 184201	E	19990915	AT 1993-904633	19930121
FI 9403430	A	19940920	FI 1994-3430	19940720
PRIORITY APPLN. INFO.:			US 1992-822924	19920121
			WO 1993-US683	19930121

AB **Neoplasm inhibitors** comprise a copolymeric carrier having attached thereto both an **anticancer** drug and a photoactivatable drug, and/or a mixt. of copolymeric carriers wherein one copolymeric carrier has attached an **anticancer** drug and the other copolymeric carrier has attached a photoactivatable drug. The **anticancer** drug is attached to the polymeric carrier by side chains which are stable in the blood stream but susceptible to hydrolysis by lysosomal enzymes intracellularly. The photoactivatable drug is attached by either the same degradable side chain or by a nondegradable attachment. The polymer carrier may optionally contain a targeting moiety. Upon administration, polymeric macromols. enter targeted **cancer** cells by pinocytosis which reduces the side effects normally elicited by the free drugs. A time lag is allowed following administration for optimal uptake of the copolymers in the **cancerous** tissue for the **anticancer** agent to begin to take effect. Then a light source of the appropriate wavelength and energy is applied to activate the photoactivatable drug. The combined effect of the **anticancer** agent and photoactivable drug provides greater cell destruction at reduced dosages and side effects. MA-Gly-Ph-Leu-Gly-ONp (MA = methacryloyl; Np = p-nitrophenyl) was copolymd. with N-(2-hydroxypropyl)methacrylamide and adriamycin was attached to the peptide side chain. A similar copolymer comprising mesochlorin e6 attached to a glycine side chain was also prepd. The 2 copolymers were administered simultaneously to mice bearing C1300 neuroblastoma **tumors** followed two days later by laser irradn. The treatment resulted in sharp decrease of the **tumor** vol.

IT **100424-72-4P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and coupling of, with **neoplasm inhibitors**)

IT **62238-85-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and coupling of, with photoactivatable **neoplasm inhibitors**)

IT **62238-85-1DP**, reaction products with mesochlorin e6 deriv. and secretin **100424-72-4DP**, reaction products with adriamycin and mesochlorin e6 deriv. and secretin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as **neoplasm inhibitor**)

L20 ANSWER 19 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:462408 HCAPLUS
DOCUMENT NUMBER: 117:62408
TITLE: Biochemical and biological studies on 2-desamino-2-methylaminopterin, an antifolate the

polyglutamates of which are more potent than the monoglutamate against three key enzymes of folate metabolism

AUTHOR(S): Rosowsky, A.; Galivan, J.; Beardsley, G. P.; Bader, H.; O'Connor, B. M.; Russello, O.; Moroson, B. A.; DeYarman, M. T.; Kerwar, S. S.; Freisheim, J. H.

CORPORATE SOURCE: Dana-Farber Cancer Inst., Harvard Med. Sch., Boston, MA, 02115, USA

SOURCE: Cancer Research (1992), 52(8), 2148-55
CODEN: CNREA8; ISSN: 0008-5472

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Biochem. and biol. studies have been carried out with 2-desamino-2-methylaminopterin (dmAMT), which **inhibits tumor** cell growth in culture but is only a weak **inhibitor** of dihydrofolate reductase (DHFR). Since it was possible that the species responsible for growth **inhibition** are polyglutamylated metabolites, the di-, tri-, and tetraglutamates of dmAMT were synthesized and tested as **inhibitors** of purified recombinant human DHFR, murine L1210 **leukemia** thymidylate synthase (TS), chicken liver glycinamide ribonucleotide formyltransferase (GARFT), and murine L1210 **leukemia** aminoimidazolecarboxamide ribonucleotide formyltransferase (AICARFT). The compds. with three and four .gamma.-glutamyl residues were found to bind two orders of magnitude better than dmAMT itself to DHFR, TS, and AICARFT, with 50% **inhibitory** concn. values in the 200 to 300 nM range against all three enzymes. In contrast, at a concn. of 10 .mu.M, dmAMT polyglutamates had no appreciable effect on GARFT activity. These findings support the hypothesis that dmAMT requires intracellular polyglutamylation for activity and indicate that replacement of the 2-amino group by 2-Me is as acceptable a structural modification in antifolates targeted against DHFR as it is in antifolates targeted against TS. In growth assays against methotrexate (MTX)-sensitive H35 rat hepatoma cells and MTX-resistant H35 sublines with a transport defect, dmAMT was highly cross-resistant with MTX, but not with the TS **inhibitors** N10-propargyl-5,8-dideazafolic acid and N-{5-[N-(3,4-dihydro-2-methyl-4-oxoquinazolin-6-yl)-N-methylamino]thenoyl}-L-glutamic acid, implicating DHFR rather than TS as the principal target for dmAMT polyglutamates in intact cells. On the other hand, an H35 subline resistant to 2'-deoxy-5-fluorouridine by virtue of increased TS activity was highly cross-resistant to N10-propargyl-5,8-dideazafolic acid and not cross-resistant to MTX, but showed partial cross-resistance to dmAMT. Both thymidine and hypoxanthine were required to protect H35 cells treated with concns. of dmAMT and MTX that **inhibited** growth by >90% relative to unprotected controls. In contrast, N10-propargyl-5,8-dideazafolic acid and N-{5-[N-(3,4-dihydro-2-methyl-4-oxoquinazolin-6-yl)-N-methylamino]thenoyl}-L-glutamic acid required only thymidine for protection. Like MTX, therefore, dmAMT appears to **inhibit** purine as well as pyrimidine de novo synthesis, and its effect on cell growth probably reflects the ability of dmAMT polyglutamates to not only block dihydrofolate redn. but also interfere with other steps of folate metab., either directly or indirectly via alteration of reduced folate pools. A similar protection pattern was obtained with mouse L1210 **leukemia** cells as with H35 cells, in that both thymidine and hypoxanthine were required for normal growth in the presence of dmAMT. Although folinic acid alone afforded full protection, 5-aminoimidazole-4-carboxamide could not be used instead of hypoxanthine, suggesting that de novo purine synthesis **inhibition** by dmAMT probably occurs at the level of AICARFT rather than GARFT. In **antitumor** assays against L1210 **leukemia** in mice,

comparable lifespan increases were achieved with dmAMT and MTX, but more dmAMT than MTX had to be used to produce the same therapeutic effect. The results of this study suggest that dmAMT may be a promising lead for the development of other, more potent, 2-desamino analogs of classical 2,4-diamino antifolates.

IT **142200-39-3**
RL: BIOL (Biological study)
(folic acid metabolizing enzymes **inhibition** by, as desaminomethylaminopterin metabolite, **neoplasm inhibition** in relation to)

L20 ANSWER 20 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1992:414410 HCAPLUS
DOCUMENT NUMBER: 117:14410
TITLE: New conjugates of antharcyclines
INVENTOR(S): Angelucci, Francesco; Bersani, Laura; Caruso, Michele; Ripamonti, Marina; Ruggieri, Daniela; Suarato, Antonino
PATENT ASSIGNEE(S): Farmitalia Carlo Erba S.r.l., Italy
SOURCE: PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9202255	A1	19920220	WO 1991-EP1449	19910801
W: AU, CA, FI, HU, JP, KR, NO, SU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
IL 98986	A1	19951208	IL 1991-98986	19910729
ZA 9106025	A	19920429	ZA 1991-6025	19910731
CA 2067184	AA	19920204	CA 1991-2067184	19910801
AU 9183113	A1	19920302	AU 1991-83113	19910801
AU 650900	B2	19940707		
EP 495053	A1	19920722	EP 1991-914151	19910801
EP 495053	B1	19960327		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE				
HU 61898	A2	19930329	HU 1992-1146	19910801
JP 05501726	T2	19930402	JP 1991-513144	19910801
JP 3169222	B2	20010521		
AT 135919	E	19960415	AT 1991-914151	19910801
ES 2088013	T3	19960801	ES 1991-914151	19910801
RU 2116087	C1	19980727	RU 1991-5011981	19910801
CN 1058598	A	19920212	CN 1991-105270	19910802
FI 9201451	A	19920402	FI 1992-1451	19920402
NO 9201287	A	19920402	NO 1992-1287	19920402
US 5387578	A	19950207	US 1992-842171	19920403
US 5547667	A	19960820	US 1994-328697	19941025

PRIORITY APPLN. INFO.: GB 1990-17024 A 19900803
WO 1991-EP1449 A 19910801
US 1992-842171 A1 19920403

OTHER SOURCE(S): MARPAT 117:14410

AB Conjugates of anthracyclines with carriers such as polyclonal and monoclonal antibodies or proteins or peptides of natural or synthetic origin are prepd. for the treatment of tumors. Thus, 3'-deamino-3'-[2(-(S)-methoxy-4-morpholinyl]doxorubicin was treated with Et 2-(cyclohexen-1-yl)oxyacetate to give 14-O-(1-carboxymethyloxy-cyclohexyl)-

3'-deamino-3'-[2(-(S)-methoxy-4-morpholinyl]doxorubicin (I). Mice bearing doxorubicin-resistant leukemia was administered with I at 0.22mg/kg had median survival time of 184% over untreated control.

IT **62238-85-1DP**, conjugates with (morpholinyl)doxorubicin deriv.
64129-75-5DP, conjugates with (morpholinyl)doxorubicin deriv.
100424-72-4DP, conjugates with (morpholinyl)doxorubicin deriv.
RL: PREP (Preparation)
(prepn. of, as **neoplasm inhibitor** with improved activity)

L20 ANSWER 21 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:220758 HCAPLUS
DOCUMENT NUMBER: 114:220758
TITLE: Platinum(II) polyamines: relationship of chain length to biological activity
AUTHOR(S): Siegmann, Deborah W.; Carraher, Charles E., Jr.; Brenner, Dora
CORPORATE SOURCE: Dep. Chem., Florida Atlantic Univ., Boca Raton, FL, 33431, USA
SOURCE: Prog. Biomed. Polym., [Proc. Am. Chem. Soc. Symp.] (1990), Meeting Date 1988, 371-88. Editor(s): Gebelein, Charles G.; Dunn, Richard L. Plenum: New York, N. Y.
CODEN: 57BPAS
DOCUMENT TYPE: Conference
LANGUAGE: English

AB Platinum (II) polyamines, which are polymeric analogs of the **cancer** drug cis-DDP, were synthesized and tested for biol. activity. The results obtained from cell culture show that several of the polymers kill cells and/or **inhibit** cell growth of growing cells but do not affect quiescent cells. The level of activity displayed by these polymers is equal to or greater than that of cis-DDP. Since some polymers are biol. active, while others are not, several factors which could influence activity were considered. The polymer chain length could det. how easily the polymer enters the cell and how well it binds to and damages cellular macromols. The size of the various platinum polyamines was measured by using light scattering photometry and Sephacryl column chromatog. No correlation was seen between the size of a polymer and its biol. activity. Mol. wt. does not appear to be an important factor in detg. the biol. effects of these platinum polyamines.

IT **102857-78-3 126250-00-8 126250-01-9**
126250-03-1 133873-63-9
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**neoplasm inhibiting** activity of, chain length effect on)

L20 ANSWER 22 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:526149 HCAPLUS
DOCUMENT NUMBER: 113:126149
TITLE: Role of substrate depletion in the inhibition of thymidylate biosynthesis by the dihydrofolate reductase inhibitor trimetrexate in cultured hepatoma cells
AUTHOR(S): Rhee, Myung S.; Balinska, Malgorzata; Bunni, Marlene; Priest, David G.; Maley, Gladys F.; Maley, Frank; Galivan, John
CORPORATE SOURCE: Wadsworth Cent. Lab. Res., New York State Dep. Health,

Albany, NY, 12201-0509, USA
SOURCE: Cancer Research (1990), 50(13), 3979-84
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of the lipid-sol. dihydrofolate reductase inhibitor, trimetrexate, on the inhibition of thymidylate biosynthesis as a result of perturbation in cellular folate pools in H35 hepatoma cells in vitro has been investigated. Exposure of the cultures to increasing concns. of trimetrexate between 2 and 20 nM causes a marked redn. in de novo thymidylate biosynthesis and a concomitant decrease in (6R)5,10-methylenetetrahydropteroylpolyglutamate(5,10-CH2H4PteGlun) from 2.0-0.2 .mu.M, resp. This is accompanied by an increase in H2PteGlun from 1.2 .mu.M in control cultures to 4.7 .mu.M in cultures exposed to 20 nM trimetrexate. The dependency of de novo thymidylate biosynthesis on intracellular 5,10-CH2H4PteGlun in trimetrexate-treated cells is compared with (a) the relationship of thymidylate biosynthesis on intracellular levels of 5,10-CH2H4PteGlun in folate-depleted cells supplemented with increments of folic acid and (b) the substrate (5,10-CH2H4PteGlun) dependence of purified thymidylate synthase from the same source. All three results are nearly identical demonstrating that trimetrexate-dependent inhibition of de novo thymidylate biosynthesis is primarily a result of substrate depletion. These results coupled with the weak inhibitory properties of H2PteGlun for thymidylate synthase (Ki = 5.0 .mu.M) suggest that H2PteGlun accumulation is not the major determinant in inhibiting thymidylate synthase following trimetrexate inhibition but under certain conditions has the potential to enhance the inhibition caused by substrate depletion.
IT **87404-63-5**
RL: BIOL (Biological study)
(trimetrexate induction of accumulation of, **inhibition** of thymidylate biosynthesis in relation to)

L20 ANSWER 23 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:125219 HCAPLUS
DOCUMENT NUMBER: 112:125219
TITLE: Oligomeric and polymeric methotrexate derivatives
INVENTOR(S): Leibnitz, Eberhard; Nastke, Rudolf; Reinisch, Gerhard; Tschiersch, Bruno; Winterfeld, Gisela
PATENT ASSIGNEE(S): Akademie der Wissenschaften der DDR, Ger. Dem. Rep.
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 267493	A1	19890503	DD 1987-308895	19871111

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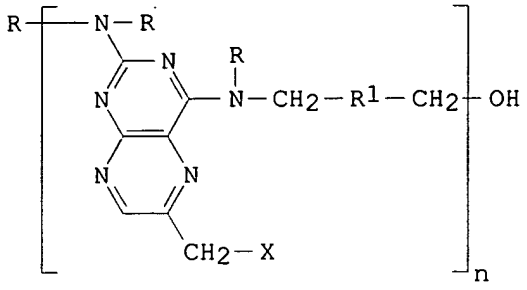

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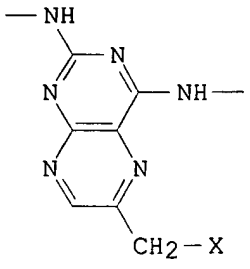

Q

AB The low toxicity methotrexate oligomers and polymer I [X = di-Na p-(N-methylamino)benzoylglutamate; R = H, CH2OH; R1 = NH, (CH2)mNH; Q; m = 2-10; n > 5] are prepd. A soln. of 4.98 g di-Na methotrexate and 4 mL 30% H2CO in 100 mL water was adjusted to pH 9.2 (NaOH), heated to 323.degree.K for 2.5 h and neutralized with HCl. The water was evapd. and the residue was dissolved in 70 mL water, treated with 10 mL M ethylenediamine and adjusted to pH 5.5 (HCl) to give a methotrexate-formaldehyde-ethylenediamine copolymer (II). Injected into mice with P388 leukemia or B16 melanoma, II prolonged the survival time more than did Di-Na methotrexate.

IT **125718-17-4P**
RL: PREP (Preparation)
(prepn. of, for **neoplasm inhibitor**)

L20 ANSWER 24 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:125218 HCAPLUS
DOCUMENT NUMBER: 112:125218
TITLE: Oligomeric and polymeric methotrexate derivatives
INVENTOR(S): Leibnitz, Eberhard; Nastke, Rudolf; Reinisch, Gerhard; Tschiersch, Bruno; Winterfeld, Gisela
PATENT ASSIGNEE(S): Akademie der Wissenschaften der DDR, Ger. Dem. Rep.
SOURCE: Ger. (East), 4 pp.
CODEN: GEXXA8
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DD 267494	A1	19890503	DD 1987-308896	19871111

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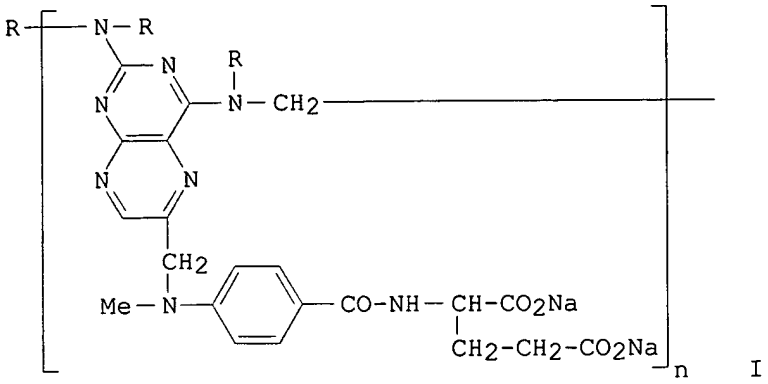
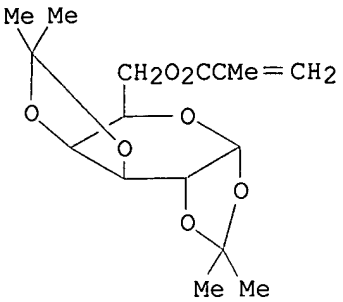


I

AB The title compds. I (R = H, CH2OH; n > 5) are prepd. by polycondensation of H2CO with methotrexate. I has low-toxicity. A soln. of 4.98 g di-Na methotrexate an 4 mL 30% H2CO in 100 mL water was adjusted to pH 9.2 (NaOH) followed by stirring at 323 k for 2.5 h. The pH was adjusted to 6 (HCl), followed by stirring at 343.degree.K for 4 h and addn. of NaOH to pH 7.2, to give poly(methylenemethotrexate) (II). Injected into mice with P388 leukemia or B16 melanoma, II prolonged the survival time more than did di-Na methotrexate.

IT **125718-18-5P**
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as **neoplasm inhibitor**)

L20 ANSWER 25 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1990:91317 HCAPLUS
DOCUMENT NUMBER: 112:91317
TITLE: Effect of galactose on interaction of N-(2-hydroxypropyl)methacrylamide copolymers with hepatoma cells in culture: preliminary application to an anticancer agent, daunomycin
AUTHOR(S): O'Hare, Kathryn B.; Hume, Isabella C.; Scarlett, Lynne; Chytry, Vladimir; Kopeckova, Pavla; Kopecek, Jindrich; Duncan, Ruth
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Keele, Keele/Staffordshire, UK
SOURCE: Hepatology (Philadelphia, PA, United States) (1989), 10(2), 207-14
CODEN: HPTLD9; ISSN: 0270-9139
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



I

AB A series of copolymers were prepd. contg. 1,2:3,4-di-O-isopropylidene-6-O-methacryloyl-.alpha.-D-galactopyranose (I) (0 to 99 mol %) methacryoyltyrosinamide and N-(2-hydroxypropyl)methacrylamide (99 to 0 mol %). The effect of galactose content on interaction with hepatoma cells in vitro was studied. Increased galactose content caused increased accumulation of N-(2-hydroxypropyl)methacrylmide copolymers by 2 human hepatoma cell lines (Hep G2 and SAH), but accumulation by rat and mouse hepatoma (HTC and NCTC) was not galactose dependent. Accumulation of N-(2-hydroxypropyl)methacrylamide copolymers by Hep G2 was an active process, being inhibited by low temp. and by the metabolic inhibitor 2,4-dinitrophenol. Addn. of N-acetylgalactosamine and polymer-galactose to the incubation medium resulted in a concn.-dependent inhibition of accumulation of galactose-contg. polymers. Addn. of fucose or galactose was without effect at the concns. used. Polymers bearing galactosamine or fucosylamine residues and, in addn., daunomycin were evaluated for cytotoxicity against Hep G2 and SAH. N-(2-Hydroxypropyl)methacrylamide copolymer-bound daunomycin produced a dose-dependent inhibition of DNA synthesis (measured by incorporation of [3H]thymidine), and the galactose-contg. polymer showed greatest inhibition.

IT **105055-03-6DP**, reaction products with aminopropanol and daunomycin and fucosylamine or galactosamine
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of and hepatoma cell cultures **inhibition** by)

L20 ANSWER 26 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1989:205196 HCAPLUS
DOCUMENT NUMBER: 110:205196
TITLE: Rescue effect of exogenous reduced folates on methotrexate polyglutamylation and dihydrofolate reductase activity in L1210 cells
AUTHOR(S): Balinska, Malgorzata
CORPORATE SOURCE: Nencki Inst. Exp. Biol., Pol. Acad. Sci., Pol.
SOURCE: Acta Biochimica Polonica (1988), 35(3), 199-205
CODEN: ABPLAF; ISSN: 0001-527X
DOCUMENT TYPE: Journal
LANGUAGE: English

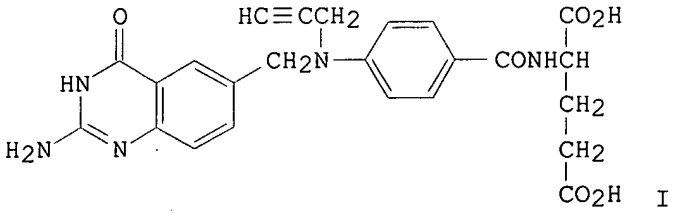
AB L1210 **leukemia** cells can be rescued from an **inhibitory** effect of methotrexate (MTX) by subsequent addn. of 5-formyltetrahydrofolate, 5-methyltetrahydrofolate, or dihydrofolate. All folates caused a marked redn. of long-chain MTX polyglutamates and increased the activity of dihydrofolate reductase. Thus, the rescue is a result of the interaction of the reduced folates with 2 processes: polyglutamylation of MTX and generation of dihydrofolate.

IT **82334-40-5**

RL: FORM (Formation, nonpreparative)
(formation of, as methotrexate metabolite, in **leukemia**, folates **inhibition** of, cytotoxicity decrease in)

L20 ANSWER 27 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1989:185516 HCAPLUS
DOCUMENT NUMBER: 110:185516
TITLE: Activity of N-(2-hydroxypropyl)methacrylamide copolymers containing daunomycin against a rat tumor model
AUTHOR(S): Cassidy, James; Duncan, Ruth; Morrison, Gilmour J.; Strohalm, Jiri; Plocova, Dana; Kopecek, Jindrich; Kaye, Stanley B.
CORPORATE SOURCE: Dep. Med. Oncol., CRC, Glasgow, G12 9LX, UK
SOURCE: Biochemical Pharmacology (1989), 38(6), 875-9
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Rats bearing s.c. Walker 256 tumor were treated with free daunomycin or with daunomycin bound to an N-(2-hydroxypropyl)methacrylamide copolymer by either a biodegradable spacer (Gly-Phe-Leu-Gly) or a nonbiodegradable spacer (Gly-Gly). Use of the copolymers to deliver daunomycin favorably affected the pharmacokinetics of the drug: more drug reached the target tumor and less reached the myocardium than when the free drug was used, suggesting that the cardiotoxicity of the compd. may be reduced in this manner. However, the only animals showing a delay in tumor growth were those given the biodegradable polymer.
IT **57950-81-9D**, reaction products with daunomycin
100424-72-4D, reaction products with daunomycin
RL: BIOL (Biological study)
(pharmacokinetics of and **neoplasm inhibition** by)

L20 ANSWER 28 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1989:50828 HCAPLUS
DOCUMENT NUMBER: 110:50828
TITLE: Formation and retention and biological activity of N10-propargyl-5,8-dideazafolic acid (CB3717) polyglutamates in L1210 cells in vitro
AUTHOR(S): Sikora, Ewa; Jackman, Ann L.; Newell, David R.; Calvert, A. Hilary
CORPORATE SOURCE: Sect. Drug Dev., Inst. Cancer Res., Sutton/Surrey, SM2 5PX, UK
SOURCE: Biochemical Pharmacology (1988), 37(21), 4047-54
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



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Searched by M. Smith

AB The formation, retention, and biol. activity of the polyglutamate metabolites of the thymidylate synthase (TS) **inhibitor** N10-propargyl-5,8-dideazafolic acid (CB3717) (I) have been investigated in L1210 murine **leukemia** cells grown in vitro. CB3717 polyglutamates were measured by HPLC using high specific activity 3H-CB3717. Following the exposure of cells to 50 .mu.M CB3717 for 6, 12 and 24 h total cellular radioactivity corresponded to 4.5, 6.8, and 5.9 .mu.M drug derived material, resp. Of this material, >70%, 57% and 51% was in the form of unchanged CB3717 at 6, 12 and 24 h resp. The remaining radioactivity was assocd. with polyglutamate metabolites of CB3717, predominantly the tetra and pentaglutamate forms. Following the removal of extracellular drug after incubation for 24 h and resuspension in drug free medium, unchanged CB3717 was lost rapidly from the cells such that after 6 h it accounted for only 5% of total cellular radioactivity. In contrast, levels of CB3717 tetra and pentaglutamates declined solely due to diln. during cell division. Measurement of the whole cell TS activity by 3H-deoxyuridine incorporation into DNA indicated that, despite the loss of unchanged CB3717 from the cell, enzyme activity remained suppressed (<10% of control) for at least 24 h after resuspension in drug free medium. The TS **inhibitory** activity of the polyglutamated metabolites of CB3717 was investigated using enzyme purified from L1210 cells. As **inhibitors**, the di-, tri-, tetra-, and pentaglutamate metabolites were 26-, 87-, 119-, and 114-fold, resp., more potent than CB3717. However, as **inhibitors** of dihydrofolate reductase prepd. from rat liver, CB3717 polyglutamates were no more than 5-fold more potent than the parent compd. This study has shown that CB3717 can undergo polyglutamation in **tumor** cells and that the metabolites are preferentially retained, giving rise to prolonged TS **inhibition**. By virtue of their potent TS **inhibitory** activity these metabolites are, therefore, most probably the intracellular effectors of CB3717 cytotoxicity.

IT **118309-41-4**
RL: BIOL (Biological study)
(as propargyldideazafolic acid metabolites, **neoplasm-inhibiting** and enzyme-**inhibiting** activities in relation to)

L20 ANSWER 29 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1989:18181 HCAPLUS
DOCUMENT NUMBER: 110:18181
TITLE: Proliferation-dependent cytotoxicity of methotrexate in murine L5178Y leukemia
AUTHOR(S): Fernandes, Daniel J.; Sur, Pratima; Kute, Timothy E.; Capizzi, Robert L.
CORPORATE SOURCE: Cancer Cent., Wake Forest Univ., Winston-Salem, NC, 27103, USA
SOURCE: Cancer Research (1988), 48(20), 5638-44
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The basis for the proliferation-dependent cytotoxicity of methotrexate was investigated in mice bearing the L5178Y ascites leukemia. Methotrexate at 60 mg/kg, i.p., reduced the viability of logarithmically growing ascites cells (55% active S-phase cells) to 28% of control, whereas the viability of the slowly growing cells (18% active-S phase) was decreased to only 59% of control. Log-phase tumor cells accumulated 8-fold higher levels of methotrexate polyglutamates compared to cells that had approached the stationary phase. However, no differences between log-phase and slowly

growing tumor cells were obsd. in the cellular levels of unmetabolized methotrexate. Intestinal mucosa and bone marrow from nontumor-bearing mice resembled slowly growing tumor cells and had markedly lower levels of methotrexate polyglutamates than logarithmically growing cells. The greater accumulation of methotrexate polyglutamates in the logarithmically growing tumor cells was consistent with an increased synthesis of methotrexate polyglutamates in these cells. The enhanced methotrexate polyglutamylation in log phase vs. slowly growing cells was not related to changes in the rates of either cellular methotrexate transport, transmembrane efflux of methotrexate, or hydrolysis of methotrexate polyglutamates. Thymidylate synthase activity measured in situ and in exts. from log-phase cells was 4- and 2-fold higher, resp., than in the more slowly growing cells. Methotrexate produced a 2.4-fold greater depletion of poly-.gamma.-glutamyl derivs. of 5,10-methylenetetrahydropteroylglutamate in log-phase cells compared to slowly growing cells, and this was a function of both the increased methotrexate polyglutamate accumulation and thymidylate synthase activity in the rapidly proliferating cells. Thus, the selectivity of methotrexate for tumors with a high growth fraction is a consequence of the rapid rates of both cellular methotrexate polyglutamate synthesis and oxidn. of 5,10-methylenetetrahydropteroyl polyglutamates by thymidylate synthase.

IT **82334-40-5**
RL: FORM (Formation, nonpreparative)
(formation of, in **neoplasm inhibition** by methotrexate)

L20 ANSWER 30 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1988:400327 HCAPLUS
DOCUMENT NUMBER: 109:327
TITLE: Anticancer agents coupled to N-(2-hydroxypropyl)methacrylamide copolymers. II. Evaluation of daunomycin conjugates in vivo against L1210 leukemia
AUTHOR(S): Duncan, R.; Kopeckova, P.; Strohalm, J.; Hume, I. C.; Lloyd, J. B.; Kopecek, J.
CORPORATE SOURCE: Dep. Biol. Sci., Univ. Keele, Keele/Staffordshire, ST5 5BG, UK
SOURCE: British Journal of Cancer (1988), 57(2), 147-56
CODEN: BJCAAI; ISSN: 0007-0920
DOCUMENT TYPE: Journal
LANGUAGE: English

AB DBA2 mice were inoculated i.p. with 105 L1210 cells. Animals subsequently treated with daunomycin (single i.p. dose, 0.25-5.0 mg/kg) all died. The max. increase in mean survival time obsd. was .apprx.135%. Animals treated with N-(2-hydroxypropyl)methacrylamide (HPMA) copolymers conjugated to daunomycin (DNM) showed a significant increase in mean survival time when the polymer-drug linkage was biodegradable (i.e., Gly-Phe-Leu-Gly). Such treatment also produced a no. of long-term survivors (>50 days). In contrast, HPMA copolymers conjugated to DNM via a non-degradable linkage (Gly-Gly) produced no increase in survival time relative to untreated control animals. The effect obsd. with biodegradable HPMA copolymer-DNM conjugates was dependent on the concn. of conjugated drug administered (optimum >5 mg/kg); the frequency of administration (multiple doses were more effective than single); the timing of administration (single doses given on days 1 and 3 were most effective); and the site of tumor inoculation and route of drug administration. Biodegradable HPMA copolymer-DNM conjugates administered i.p. were active against L1210 inoculated s.c. at higher doses than required to curb a peritoneal tumor. Under certain exptl. conditions

polymer-DNM conjugates contg. fucosylamine or galactosamine proved more active than conjugates without the carbohydrate moiety. The mechanism of drug-conjugate action in vivo is at present unclear. Radioiodination of polymer showed .apprx.75% of polymer-drug conjugate to be excreted 24 h after i.p. administration. Synthesis of HPMA conjugates contg. [3H]DNM showed that polymer contg. Gly-Gly-[3H]DNM was excreted (60% of radioactivity in the urine, 24 h) in macromol. form. In contrast polymer contg. Gly-Phe-Leu-Gly-[3H]DNM was largely excreted in the form of low-mol.-wt. species.

IT **100502-85-0DP**, reaction products with daunomycin
105055-03-6DP, reaction products with daunomycin
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of and as **neoplasm inhibitors**)

L20 ANSWER 31 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:590520 HCAPLUS
DOCUMENT NUMBER: 107:190520
TITLE: Evidence for direct inhibition of de novo purine synthesis in human MCF-7 breast cells as a principal mode of metabolic inhibition by methotrexate
AUTHOR(S): Allegra, Carmen J.; Hoang, K.; Yeh, Grace Chao; Drake, James C.; Baram, Jacob
CORPORATE SOURCE: Clin. Pharmacol. Branch, Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Journal of Biological Chemistry (1987), 262(28), 13520-6
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The role of dihydrofolate (H2PteGlu) accumulation in the **inhibition** of de novo purine synthesis by methotrexate (MTX) in human MCF-7 breast **cancer** cells was investigated. Previous studies have shown that cytotoxic concns. of MTX that **inhibit** dihydroflate reductase produce only minimal depletion of the reduced folate cofactor, 10-formyltetrahydrofolate, required for purine synthesis. At the same time, de novo purine synthesis is totally **inhibited**. In these studies, 10 .mu.M MTX causes **inhibition** of purine synthesis at the step of phosphoribosylaminoimidazolecarboxamide (AICAR) transformylase, as reflected in a 2-3-fold expansion of the intracellular AICAR pool. The **inhibition** of purine synthesis coincides with the rapid intracellular accumulation of H2PteGlu, a known **inhibitor** of AICAR transformylase. When the generation of H2PteGlu is blocked by pretreatment with 50 .mu.M 5-fluorodeoxyuridine (FdUrd), an **inhibitor** of thymidylate synthase, MTX no longer causes **inhibition** of purine synthesis. The lipid-sol. antifolate trimetrexate produced modest 10-formyltetrahydrofolate depletion, but caused marked H2PteGlu accumulation and a parallel **inhibition** of purine biosynthesis. The evidence leads to the conclusion that MTX and the lipid-sol. analog trimetrexate cause **inhibition** of purine biosynthesis through the accumulation of H2PteGlu behind the blocked dihydrofolate reductase reaction.

IT **82334-40-5**, Methotrexate polyglutamate
RL: FORM (Formation, nonpreparative)
(formation of, methotrexate **inhibition** of purine formation in human breast cells in relation to)

L20 ANSWER 32 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:546917 HCAPLUS
DOCUMENT NUMBER: 107:146917

TITLE: Effects on dihydrofolate reductase of methotrexate metabolites and intracellular folates formed following methotrexate exposure of human breast cancer cells
AUTHOR(S): Drake, James C.; Allegra, Carmen J.; Baram, Jacob; Kaufman, Bernard T.; Chabner, Bruce A.
CORPORATE SOURCE: Div. Cancer Treat., Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Biochemical Pharmacology (1987), 36(14), 2416-18
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The **inhibition** of dihydrofolate reductase (DHFR) of human breast **cancer** cells by metholrexate (I), 7-hydroxy-I, and various polyglutamates of I and 7-hydroxy-I was examd. I and its polyglutamates were the most potent **inhibitors** (ki = 1.7 .times. 10-10-0.5 .times. 10-10M); 7-hydroxy-I, formyldihydrofolate, and their tetra- and pentaglutamates, resp., were 100-500-fold less potent than I or its polyglutamates. Polyglutamylation of I or 7-hydroxy-I resulted in only modest increase in their **inhibitory** effects; polyglutamylation of formyldihydrofolate, however, markedly enhanced the effect of these compd. or DHFR. These observations are relevant to mechanism by which I **inhibits** DHFR and is therefore cyclotoxic to **tumor** cells.
IT **82334-40-5**, Methotrexate polyglutamate
RL: BIOL (Biological study)
(dihydrofolate reductase of human breast **cancer** cell **inhibition** by, kinetics of)

L20 ANSWER 33 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:188565 HCAPLUS
DOCUMENT NUMBER: 106:188565
TITLE: L-Asparaginase-induced modulation of methotrexate polyglutamylation in murine leukemia L5178Y
AUTHOR(S): Sur, Pratima; Fernandes, Daniel J.; Kute, Timothy E.; Capizzi, Robert L.
CORPORATE SOURCE: Bowman Gray Sch. Med., Wake Forest Univ., Winston-Salem, NC, 27103, USA
SOURCE: Cancer Research (1987), 47(5), 1313-18
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The modulation of methotrexate [59-05-2] polyglutamylation by L-asparaginase [9015-68-3] was examd. in mice bearing sublines of **leukemia** L5178Y that have different sensitivities to asparaginase. A single i.p. injection of 200 IU/kg of asparaginase completely **inhibited** ascites **tumor** cell growth in the parental L5178Y/S+ **tumor** for 120 h compared to 72 and 30 h in the L5178Y/S (intermediate sensitivity) and L5178Y/S.+-. (least sensitivity) sublines, resp. Similarly, DNA and protein synthesis were completely **inhibited** by asparaginase for 96 h in L5178Y/S+ cells, but only for 72 and 24 h in L5178Y/S and L5178Y/S.+-. cells. In each **tumor** the temporal patterns of depletion and recovery of S-phase cells were similar to the patterns of suppression and recovery of DNA and protein synthesis obsd. in that **tumor**. When methotrexate was administered at either 96 or 24 h after asparaginase during the asparaginase-induced S-phase nadirs of L5178Y/S+ and L5178Y/S.+-. cells, resp., subsequent methotrexate polyglutamylation was **inhibited** 83 and 92% compared to **tumor** cells exposed to methotrexate only. Recovery of methotrexate polyglutamylation in both **tumors**

following L-asparaginase pretreatment coincided in time and the return in the fraction of S-phase cells towards the pretreatment values. The **inhibition** of methotrexate polyglutamate accumulation by asparaginase was assocd. with decreased retention of methotrexate in **tumor** cells. In contrast, asparaginase had no significant effect on methotrexate polyglutamate accumulation and methotrexate retention when administered after methotrexate. Apparently, the asparaginase-induced modulation of methotrexate polyglutamylation in mice was directly related to the time course of **inhibition** and recovery of **tumor** cell proliferation by asparaginase, and thus varied with the intrinsic sensitivity of the individual **tumor** to the enzyme.

IT **82334-40-5**
RL: BIOL (Biological study)
(formation and accumulation of, in **leukemia** cells, asparaginase **inhibition** of, mechanism and shedule dependency in)

L20 ANSWER 34 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:120194 HCAPLUS
DOCUMENT NUMBER: 106:120194
TITLE: Design of polymeric inhibitors for the control of crystal polymorphism. Induced enantiomeric resolution at racemic histidine by crystallization at 25.degree.C
AUTHOR(S): Weissbuch, I.; Zbaida, D.; Addadi, L.; Leiserowitz, L.; Lahav, M.
CORPORATE SOURCE: Dep. Struct. Chem., Weizmann Inst. Sci., Rehovot, 76100, Israel
SOURCE: Journal of the American Chemical Society (1987), 109(6), 1869-71
CODEN: JACSAT; ISSN: 0002-7863
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A new approach for the controlled crystn. of **metastable** polymorphic forms is described. The method comprises the design of chiral polymeric **inhibitors** which match the mol. and crystal structures of the stable polymorph thus allowing the **metastable** one to ppt. by kinetic control. This approach was applied to the induced resoln. of racemic histidine hydrochloride at 25.degree., by forcing it to crystallize in one of the two enantiomorphous crystal structures, under conditions where it normally would crystallize in the form of a racemic compd.

IT **106520-74-5 106520-76-7**
RL: USES (Uses)
(**inhibitors**, for control of crystal polymorphism in resoln. of histidine hydrochloride by crystn.)

L20 ANSWER 35 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:78337 HCAPLUS
DOCUMENT NUMBER: 106:78337
TITLE: Evidence for direct inhibition of metabolic pathways as a mechanism of action of methotrexate
AUTHOR(S): Allegra, C. J.; Baram, J.; Chabner, B. A.
CORPORATE SOURCE: Clin. Pharmacol. Branch, Natl. Cancer Inst., Bethesda, MD, 20892, USA
SOURCE: Chem. Biol. Pteridines, 1986, Pteridines Folic Acid Deriv., Proc. Int. Symp. Pteridines Folic Acid Deriv.: Chem., Biol. Clin. Aspects, 8th (1986), 981-4.
Editor(s): Cooper, Bernard A.; Whitehead, V. Michael.
de Gruyter: Berlin, Fed. Rep. Ger.

CODEN: 55HGAH
DOCUMENT TYPE: Conference
LANGUAGE: English
AB Exposure of human MCF-7 breast **cancer** cells to 1 .mu.M methotrexate (I) [59-05-2] resulted in marked changes in intracellular folate pools. Dihydrofolate [4033-27-6] increased from <1% in unexposed cells to >30% after 2 h of I. 10-Formyl dihydrofolate [28459-40-7], not found in unexposed cells, accumulated in cells after I exposure. Detectable levels of the higher polyglutamates (Glu3-Glu3) were not found at time points earlier than 3 h after exposure to 1 .mu.M I. **Inhibition** of de nova purine and pyrimidine synthesis was complete within 2-3 h of exposure. Further studies suggest that **inhibition** of metabolic pathway following I exposure may result from direct **inhibition** of folate-requiring enzymes by the accumulation of intracellular dihydrofolate. These effects may be enhanced/prolonged by the subsequent generation of methotrexate polyglutamate [**82334-40-5**].

L20 ANSWER 36 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:43546 HCAPLUS
DOCUMENT NUMBER: 106:43546
TITLE: The effects on 4-aminoantifolates on 5-formyltetrahydrofolate metabolism in L1210 cells. A biochemical basis of the selectivity of leucovorin rescue
AUTHOR(S): Matherly, Larry H.; Barlowe, Charles K.; Phillips, Valesia M.; Goldman, I. David
CORPORATE SOURCE: Med. Coll. Virginia, Virginia Commonw. Univ., Richmond, VA, 23298, USA
SOURCE: Journal of Biological Chemistry (1987), 262(2), 710-17
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Studies designed to evaluate possible **inhibitory** effects of diaminoantifolates on folate-dependent biosynthetic enzymes in intact L1210 **leukemia** cells are described. A novel approach is described which involves an assessment of the metab. of and biosynthetic flux of the one-carbon moiety from (6S)5-formyltetrahydrofolate [58-05-9] in folate-depleted cells. Pretreatment with methotrexate [59-05-2] (10 .mu.M), resulting in the formation of methotrexate polyglutamate [**82334-40-5**], or continuous incubation with trimetrexate [52128-35-5] (1 .mu.M) **inhibited** growth of folate-depleted L1210 cells in the presence of folic acid [59-30-3] or 5-formyltetrahydrofolate. In both control and drug-treated cells, double-labeled (6S)-5-[14C]formyl[3H]tetrahydrofolate was rapidly metabolized with the loss of the [14C]formyl group. Under all conditions, the predominant metabolite was 3H-labeled 10-formyl tetrahydrofolate [2800-34-2], detectable both intracellularly and extracellularly. In drug-treated cells, there was a remarkably small decrease in the level of 10-formyl[3H]tetrahydrofolate (.apprx.30%) and a 10-fold rise in the level of 3H-labeled dihydrofolate [4033-27-6] to less than 20% of the total folate pool. Findings of this study demonstrate that treatment of cells with methotrexate or trimetrexate suppresses the flow of one-C units through the de novo nucleotide and amino acid biosynthetic pathways, even when high levels of reduced folate cofactors are present. This appears to involve effects on specific folate-dependent biosynthetic reactions, including thymidylate synthase [9031-61-2] and the purine transformylase [9032-02-4] by methotrexate and/or dihydrofolate polyglutamates that accumulate in drug-treated cells. These **inhibitory** effects may

account for the failure of 5-formyltetrahydrofolate to rescue **tumor** cells which have metabolized methotrexate to polyglutamates. Furthermore, the lack of appreciable build-up of methotrexate polyglutamates in normal cells of the bone marrow and gastrointestinal tract may account for the ability of reduced folates to reverse antifolate effects in these tissues and, hence, may account for the selectivity of rescue.

L20 ANSWER 37 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:141770 HCAPLUS
DOCUMENT NUMBER: 104:141770
TITLE: Purification and characterization of Plasmodium berghei DNA topoisomerases I and II: drug action, inhibition of decatenation and relaxation, and stimulation of DNA cleavage
AUTHOR(S): Riou, Jean Francois; Gabillot, Michele; Philippe, Michel; Schrevel, Joseph; Riou, Guy
CORPORATE SOURCE: Lab. Pharmacol. Clin. Mol., Inst. Gustave Roussy, Villejuif, 94800, Fr.
SOURCE: Biochemistry (1986), 25(7), 1472-9
CODEN: BICHAW; ISSN: 0006-2960
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Topoisomerases I and II of the protozoan parasite P. berghei were purified from mouse erythrocytes infected with the organism, and the enzymes were tested as an enzymic system for antimalarial drug screening assays. Plasmodium DNA topoisomerase II consisted of 2 subunits with a mol. wt. of about 160,000. The enzyme was ATP- and Mg2+-dependent. The conditions for the reactions of relaxation, unknotting, decatenation, and catenation were similar to those obsd. with enzymes from other eukaryotic cells. Plasmodium Topoisomerase I was a monomeric enzyme with a mol. wt. of 70,000-100,000. It was ATP-independent and K+- or Na-dependent. Mg2+ was not required for relaxation but stimulates the reaction. Topoisomerase II was more sensitive to drug action than topoisomerase I. The most active drugs were the ellipticine derivs. Antimalarial drugs currently used in human clin. therapy were poor **inhibitors**. Some **antitumoral** drugs stimulated the double-stranded DNA cleavage activity of Plasmodium topoisomerase II, like that of mammalian topoisomerases II. Antimalarial drugs had no stimulating activity. Apparently, Plasmodium topoisomerases are not good targets for antimalarial drugs.
IT **89160-73-6 100466-41-9**
RL: BIOL (Biological study)
(DNA topoisomerase of Plasmodium berghei **inhibition** by)

L20 ANSWER 38 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:122731 HCAPLUS
DOCUMENT NUMBER: 104:122731
TITLE: Role of polyglutamates in methotrexate action
AUTHOR(S): Wilmanns, W.; Schalhorn, A.
CORPORATE SOURCE: Med. Klin. III, Ludwig-Maximilians-Univ., Munich, 8000, Fed. Rep. Ger.
SOURCE: Chemioterapia (1985), 4(5), 349-53
CODEN: CHEMEV; ISSN: 0392-906X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB In human subjects receiving high-dose methotrexate (MTX) [59-05-2] therapy (8-10 g/m2, infused over 6 h), erythrocyte accumulation of MTX and MTX polyglutamate [82334-40-5] resulted in intracellular concns. much

higher than the serum MTX levels. Efflux differences with long-lasting storage of the polyglutamate forms of MTX up to the total life-span of the single erythrocyte were obsd. Even 6-14 days after high dose MTX therapy, high MTX levels could be detd. in sarcoma tissue. In addn. to unchanged MTX, there was a formation of MTX polyglutamates. The portion of polyglutamates varied considerably, accounting for 3-68% of the total tumor MTX. A relation between the formation of MTX polyglutamates and the clin. effectiveness of high-dose MTX therapy is possible.

IT **82334-40-5**
RL: BIOL (Biological study)
(**neoplasm inhibition** by methotrexte in relation to, in humans)

L20 ANSWER 39 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1986:157 HCAPLUS
DOCUMENT NUMBER: 104:157
TITLE: Glutamylation of methotrexate in hepatoma cells in vitro: regulation and the development of specific inhibitors
AUTHOR(S): Galivan, John; Nimec, Zenia; Coward, James K.; McGuire, John J.
CORPORATE SOURCE: Wadsworth Cent. Lab. Res., New York State Dep. Health, Albany, NY, 12201, USA
SOURCE: Advances in Enzyme Regulation (1985), 23, 13-23
CODEN: AEZRA2; ISSN: 0065-2571
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Methotrexate [59-05-2] was glutamylated in cultured hepatoma cells to derivs. that contain a total of 2 to 5 .gamma.-glutamyl residues. The rate of polyglutamate formation and extent of accumulation were saturable with respect to both medium concn. of methotrexate and time. Maximal rates of glutamylation and accumulation of methotrexate polyglutamates at steady state occurred at approx. 10 .mu.M extracellular methotrexate. Inclusion of physiol. concns. of insulin or removal of folate from the medium each causes doubling of the rate of glutamylation, and these effects were additive. Insulin [9004-10-8] and folate [59-30-3] restriction also enhanced the accumulation of methotrexate polyglutamates. In combination they resulted in a doubling in the intracellular methotrexate polyglutamate pool at steady state and a shift in the polyglutamate distribution to longer-chain-length species. The importance of the longer-chain-length polyglutamates was apparent from the 6-h retention of the polyglutamate species: Glu2 [41600-13-9], 15%; Glu3 [41600-14-0], 21%; Glu4 [73610-81-8], 50%; and Glu5 [80801-54-3], 83%. In probing the glutamylation reaction, a new series of inhibitors have been initiated. These are based upon replacing the incoming glutamate with 4-fluoroglutamate or synthesizing methotrexate with the glutamate replaced by 4-fluoroglutamate. The 4-fluoroglutamayl analogs of methotrexate were effective inhibitors of dihydrofolate reductase [9002-03-3] but could not be glutamylated. They can be utilized to probe the role of glutamylation in antifolate activity and folate metab.

IT **82334-40-5**
RL: FORM (Formation, nonpreparative)
(formation of, as methotrexate metabolite, **inhibitors** and regulation of)

L20 ANSWER 40 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:589353 HCAPLUS
DOCUMENT NUMBER: 103:189353
TITLE: Determinants of the sensitivity of human small-cell

lung cancer cell lines to methotrexate
AUTHOR(S): Curt, Gregory A.; Jolivet, Jacques; Carney, Desmond N.; Bailey, Brenda D.; Drake, James C.; Clendeninn, Neil J.; Chabner, Bruce A.
CORPORATE SOURCE: Div. Cancer Treat., Natl. Cancer Inst., Bethesda, MD, 20205, USA
SOURCE: Journal of Clinical Investigation (1985), 76(4), 1323-9
CODEN: JCINAO; ISSN: 0021-9738
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The determinants of methotrexate (MTX) [59-05-2] responsiveness was characterized in patient-derived cell lines of small-cell lung **cancer** (SCLC). Clonogenic survival was correlated with factors known to affect sensitivity to drug. NCI-H209 and NCI-H128 were most drug sensitive, with drug concns. required to **inhibit** clonogenic survival by 50% with <0.1 .mu.M MTX. Six cell lines (NCI-H187, NCI-H345, NCI-H60, NCI-H524, NCI-H146, and NCI-N417D) were relatively drug resistant. In all cell lines studied, higher mol. wt. MTX-polyglutamates (MTX-PGs) [**82334-40-5**] with 3-5 glutamyl moieties were selectively retained. Relative resistance to low (1.0 .mu.M) drug concns. appeared to be largely due to decreased intracellular metab. of MTX. Five of the 6 resistant lines were able to synthesize polyglutamates at higher (10 .mu.M) drug concns., although one resistant cell line (NCI-N417D) did not synthesize higher mol. wt. MTX-PGs, even after exposure to 10 .mu.M drug. Two cell lines with resistance to 10 .mu.M MTX (NCI-H146 and NCI-H524) synthesized and retained higher mol. wt. MTX-PGs in excess of binding capacity after exposure to 10 .mu.M drug. However, the specific activity of thymidylate synthase in these cell lines was low. MTX sensitivity in patient-derived cell lines of SCLC requires the ability of cells to accumulate and retain intracellular drug in the form of polyglutamate metabolites in excess of dihydrofolate reductase [9002-03-3], as well as a high basal level of consumption of reduced folates in the synthesis of thymidylate.

L20 ANSWER 41 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:561359 HCAPLUS
DOCUMENT NUMBER: 103:161359
TITLE: Polymer material which is bacteristatic or fungistatic
INVENTOR(S): Hiles, Maurice
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 8502190	A1	19850523	WO 1984-US1825	19841109
W: AU, JP				
RW: BE, FR, GB, NL, SE				
AU 8436740	A1	19850603	AU 1984-36740	19841109
EP 160700	A1	19851113	EP 1985-900273	19841109
R: BE, FR, GB, NL, SE				

PRIORITY APPLN. INFO.: US 1983-550192 19831109
US 1984-668287 19841105
WO 1984-US1825 19841109

AB The title polymers, compatible with healthy tissue and useful in wound dressing, are prepd. from polymers bearing .gtoreq.2 active H atoms, chelating agents bearing .gtoreq.1 active H atom, and polyisocyanates in the presence of metal-contg. catalysts for urethane formation. Thus, stirring (HOCH2)2NCH2CH2N(CH2OH)2 1, polypropylene glycol (no.-av. mol. wt. 2000) 2, and PhHgOAc [62-38-4] 0.005 part 3 h at 160.degree.F/20 in. Hg, cooling, and stirring with 0.6 part MDI gave a polyurethane [**98757-00-7**], a 1-mm cube of which **inhibited** S. aureus growth to a diam. of 32.5, 23.5, and 18.5 mm after 1, 29, and 365 days, resp. The use of this polymer in healing chronic mellitus ulceration is illustrated.

L20 ANSWER 42 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:553524 HCAPLUS
DOCUMENT NUMBER: 103:153524
TITLE: The effect of leucovorin on the synthesis of methotrexate poly-.gamma.-glutamates in the MCF-7 human breast cancer cell line
AUTHOR(S): Kennedy, D. G.; Van den Berg, H. W.; Clarke, R.; Murphy, R. F.
CORPORATE SOURCE: Dep. Biochem., Queen's Univ. Belfast, Belfast, BT9 7BL, UK
SOURCE: Biochemical Pharmacology (1985), 34(16), 2897-903
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The modulating effects of leucovorin [58-05-9] on the synthesis of methotrexate (MTX) polyglutamates in the MCF-7 human breast **cancer** cell line were investigated with a HPLC system. Leucovorin decreased the intracellular level of MTX [59-05-2] and profoundly affected methotrexate polyglutamate [**82334-40-5**] synthesis irresp. of whether it was administered with or after MTX. **Inhibition** of MTX polyglutamate synthesis was also obsd. when concns. of leucovorin too low to affect intracellular levels of MTX were employed. Leucovorin did not promote efflux of MTX from the MCF-7 cells and did not affect the distribution of the retained drug amongst the various polyglutamate forms.
IT **82334-40-5**
RL: FORM (Formation, nonpreparative)
(formation of, by breast **cancer** cells of human, leucovorin **inhibition** of)

L20 ANSWER 43 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:553120 HCAPLUS
DOCUMENT NUMBER: 103:153120
TITLE: Polyglutamation of methotrexate. Is methotrexate a prodrug?
AUTHOR(S): Chabner, Bruce A.; Allegra, Carmen J.; Curt, Gregory A.; Clendeninn, Neil J.; Baram, Jacob; Koizumi, Shoichi; Drake, James C.; Jolivet, Jacques
CORPORATE SOURCE: Div. Cancer Treat., Natl. Cancer Inst., Bethesda, MD, 20205, USA
SOURCE: Journal of Clinical Investigation (1985), 76(3), 907-12
CODEN: JCINAO; ISSN: 0021-9738
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review and discussion with 34 refs. Polyglutamation of methotrexate (I) [59-05-2] resulting in the addn. of 1-4 glutamyl groups, takes place in both normal and malignant cells. The ability of cells to form

polyglutamates of I has a no. of consequences, all of which enhance the cytotoxic action of I. In addn. the polyglutamation process appears likely to be an important determinant of tumor sensitivity and I's selectivity of action against malignant as compared to normal tissue.

IT **82334-40-5**
RL: FORM (Formation, nonpreparative)
(formation of, **neoplasm inhibition** in relation to)

L20 ANSWER 44 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:515857 HCAPLUS
DOCUMENT NUMBER: 103:115857
TITLE: Inhibition of phosphoribosylaminoimidazolecarboxamide transformylase by methotrexate and dihydrofolic acid polyglutamates
AUTHOR(S): Allegra, Carmen J.; Drake, James C.; Jolivet, Jacques; Chabner, Bruce A.
CORPORATE SOURCE: Div. Cancer Treat., Natl. Cancer Inst., Bethesda, MD, 20205, USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America (1985), 82(15), 4881-5
CODEN: PNASA6; ISSN: 0027-8424
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The enhanced **inhibitory** potency of methotrexate polyglutamate (MTX polyglutamate) [**82334-40-5**] and dihydrofolate pentaglutamate [98204-33-2] on the catalytic activity of phosphoribosylaminoimidazolecarboxamide transformylase (AICAR transformylase) [9032-03-5] purified from MCF-7 human breast **cancer** cells was detd. MTX [59-05-2] and dihydrofolate [4033-27-6] both monoglutamates, were weak competitive **inhibitors** of AICAR transformylase with Ki of 143 and 63 .mu.M, resp., and their **inhibitory** capacity was largely unaffected by the glutamated state of the folate cosubstrate. In contrast, MTX polyglutamates were potent competitive **inhibitors**, with an .apprxeq.10-fold increase in **inhibitory** potency with the addn. of each glutamate group up to 4 (i.e., the pentaglutamate deriv. [80801-53-2]). MTX tetraglutamate [80801-54-3] and MTX pentaglutamates were the most potent, with equiv. Kis of 5.6 .times. 10-8 M; they were 2500-fold more potent than MTX. Dihydrofolate pentaglutamate was as potent an **inhibitor** as MTX pentaglutamate, with a Ki of 4.3 .times. 10-8 M. The potent **inhibitory** effects demonstrated by the polyglutamate compds., when tested against the folate monoglutamate substrate were sharply curtailed when folate pentaglutamate was used as the substrate. MTX and dehydrofolate pentaglutamates were only 7- and 25-fold more potent than their monoglutamate counterparts under these conditions. A model depicting these complex interactions is postulated. These findings have significant implications regarding the **antitumor** mechanism of action of MTX.

IT **82334-40-5**
RL: BIOL (Biological study)
(phosphoribosylaminoimidazolecarboxamide transformylase **inhibition** by, **neoplasm inhibition** in relation to)

L20 ANSWER 45 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:100802 HCAPLUS
DOCUMENT NUMBER: 102:100802
TITLE: Polymeric [[(oxazolidinyl)alkyl]amino]anthraquinones
INVENTOR(S): Murdock, Keith Chadwick; Webb, Richard Lansing

PATENT ASSIGNEE(S): American Cyanamid Co. , USA
SOURCE: Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 122417	A2	19841024	EP 1984-102214	19840302
EP 122417	A3	19860108		
R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE				
US 4526788	A	19850702	US 1983-476901	19830318
JP 59182818	A2	19841017	JP 1984-50828	19840316
CA 1225394	A1	19870811	CA 1984-449832	19840316
US 4715993	A	19871229	US 1985-744701	19850614

PRIORITY APPLN. INFO.: US 1983-476901 19830318
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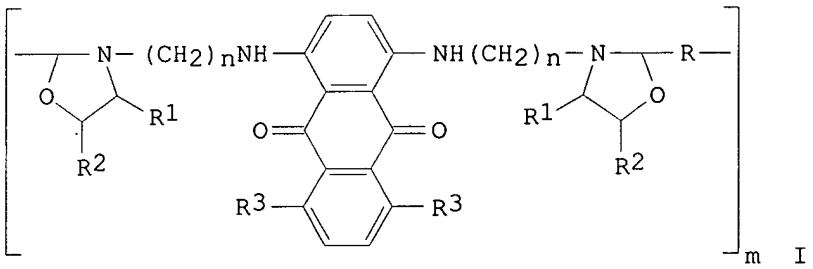

I

AB Polymeric 1,4-bis-[(1,3-oxazolin-3-yl)alkylamino]anthraquinones (I; R1 and R2 = H or Me; R3 = H or OH; R = (CH2)p where p = 0-4, o-, m- or p-phenylene; n = 2-4, and m = 2-100), prepd. by condensation of 1,4-bis-[(2-hydroxyalkylamino]anthraquinones with dialdehydes, are useful anticancer agents. The reaction is carried out in inert solvents (at reflux temp.) in the presence of 3A mol. sieves (2-20 h). Thus, to heated (55.degree.) 1,4-dihydroxy-5,8-bis[(2-(2-hydroxyethylamino)ethyl]amino]anthraquinone [70476-84-5] in DMF was added 38% glyoxal [107-22-2] (at 34.degree.). The mixt. was refluxed for 18 h, 3A mol. sieves were added, warmed at 40.degree. for several hours, and then heated at 98.degree. for 1.5 h. Poly[5,8-dihydroxy-1,4-anthraquinonyleniminoethylene-[2,2'-bisoxazolidine]-3,3'-diylethylenimino] [94797-89-4] was obtained after the work-up. The active compds. may be administered parenterally or i.p. Solns. or dispersions of the active compds. can be prepd. in water suitably mixed with a surfactant or in glycerol, polyethylene glycol, etc.

IT **94797-82-7P 94797-83-8P 94797-84-9P**
94797-85-0P 94797-86-1P 94797-87-2P
94797-88-3P 94797-89-4P 94797-99-6P
94798-00-2P 94798-01-3P 94798-02-4P
94798-04-6P 94798-05-7P 94798-06-8P
94798-07-9P
RL: THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(prepn. of, as **neoplasm inhibitor**)

L20 ANSWER 46 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1985:72544 HCAPLUS
DOCUMENT NUMBER: 102:72544
TITLE: Prevention of methotrexate cytotoxicity by asparaginase inhibition of methotrexate polyglutamate formation
AUTHOR(S): Jolivet, Jacques; Cole, Diane E.; Holcenberg, John S.; Poplack, David G.
CORPORATE SOURCE: Inst. Cancer Montreal, Montreal, QC, H2L 4M1, Can.
SOURCE: Cancer Research (1985), 45(1), 217-20
CODEN: CNREA8; ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Escherichia coli Asparaginase (Asnase) [9015-68-3] pretreatment protected Asnase-sensitive L5178Y cells from methotrexate (MTX) [59-05-2] cytotoxicity. After a 3-h exposure to 0.5 .mu.M MTX, 67% of intracellular drug was in the form of methotrexate polyglutamate [**82334-40-5**] derivs. (MTXPGs) contg. a total of 2 to 5 glutamyl residues (MTX-Glu2-5), and cloning efficiency in drug-free medium was only 7% of untreated control. After a 3-h pretreatment with E. coli Asnase (0.1 unit/mL), [3H]thymidine incorporation dropped by 29%, MTXPG formation during subsequent MTX exposure decreased by more than one-half (MTX-Glu2 [**82334-40-5**] unchanged; MTX-Glu3 [73610-81-8] and MTX Glu4 [80801-54-3] decreased to 51.7 and 18.5% of levels achieved in cells not pretreated with Asnase; no MTX-Glu5 [80801-53-2] formed), and cloning efficiency increased to 71% of untreated control. This effect was not due to decreased MTX uptake into L5178Y cells or to decreased intracellular free L-glutamate [56-86-0] or L-glutamine [56-85-9] levels. A 3-h exposure of L5178Y cells to media lacking L-isoleucine, an essential amino acid for cell growth, prior to MTX exposure **inhibited** [3H]thymidine incorporation by 37%, decreased subsequent MTXPG formation by 62%, and increased subsequent cloning in drug-free medium to control levels. Decreased MTXPG formation was responsible for the prevention of MTX cytotoxicity seen after both pretreatments. Unmetabolized MTX rapidly left L5178Y cells after removal of extracellular MTX. Consequently, lower levels of unbound intracellular drug, a prerequisite of drug activity, were maintained in pretreated than in control cells after passage in drug-free medium. Asnase pretreatment protects L5178Y cells from the cytotoxic effects of MTX, possibly through **inhibition** of cell growth which nonspecifically decreases MTXPG formation.

L20 ANSWER 47 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:563176 HCAPLUS
DOCUMENT NUMBER: 101:163176
TITLE: Detection by high-performance liquid chromatography of methotrexate and its metabolites in tumor tissue from osteosarcoma patients treated with high-dose methotrexate/leucovorin rescue
AUTHOR(S): Samuels, Lawrence L.; Feinberg, Aaron; Moccio, Donna M.; Sirotnak, Francis M.; Rosen, Gerald
CORPORATE SOURCE: Mem. Sloan-Kettering Cancer Cent., New York, NY, 10021, USA
SOURCE: Biochemical Pharmacology (1984), 33(17), 2711-14
CODEN: BCPCA6; ISSN: 0006-2952
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Methotrexate polyglutamates were detected in osteogenic **sarcoma**

tumor samples obtained from patients 24 or 48 h after receiving high-dose methotrexate (MTX) [59-05-2]/leucovorin [58-05-9] rescue therapy. **Tumor** samples were assayed by high-performance liq. chromatog., and polyglutamyl metabolites, along with MTX, were quantitated using both direct UV absorption at 313 nm and an enzyme titrn. assay. Good agreement between these 2 methods was found, although the more sensitive enzyme assay detected peaks in some samples not detected by UV absorbance. A wide variation in MTX:methotrexate polyglutamate [**82334-40-5**] levels (1:1 to 25:1) was found among the 6 clin. samples studied. Also, no correlation between the extent of polyglutamate formation and plasma levels (detd. at the time of **tumor** sampling) was obsd. High intracellular levels of a deriv. which appears to be the 7-hydroxy metabolite [5939-37-7] of MTX were also detected in four of six samples. This material coeluted with authentic std., showed spectral properties like std. 7-OH-MTX, and did not **inhibit** dihydrofolate reductase [9002-03-3].

L20 ANSWER 48 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:17306 HCAPLUS
DOCUMENT NUMBER: 100:17306
TITLE: Methotrexate polyglutamates in cultured human breast cancer cells
AUTHOR(S): Jolivet, Jacques; Chabner, Bruce A.
CORPORATE SOURCE: Div. Cancer Treat., Natl. Cancer Inst., Bethesda, MD, 20205, USA
SOURCE: Progress in Cancer Research and Therapy (1983), 28(Dev. Target-Oriented Anticancer Drugs), 89-96
CODEN: PCRTDK; ISSN: 0145-3726
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A study of the action of methotrexate (I) [59-05-2] in human breast cancer cells indicates that the formation of methotrexate polyglutamate [82334-40-5] may explain the antitumor effect of I against slowly growing carcinomas. The implication of I-polyglutamate formation in I resistance is also discussed.
IT **82334-40-5**
RL: FORM (Formation, nonpreparative)
(formation of, **neoplasm inhibiting** activity of methotrexate in relation to)

L20 ANSWER 49 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1984:334 HCAPLUS
DOCUMENT NUMBER: 100:334
TITLE: Methotrexate polyglutamates in human fibroblasts: reversal of antifolate cytotoxicity
AUTHOR(S): Rosenblatt, David S.; Whitehead, V. Michael
CORPORATE SOURCE: Med. Res. Counc. Genet. Group, McGill Univ., Montreal, QC, Can.
SOURCE: Chem. Biol. Pteridines, Proc. Int. Symp. Pteridines Folic Acid Deriv.: Chem., Biol. Clin. Aspects, 7th (1983), Meeting Date 1982, 947-51. Editor(s): Blair, John A. de Gruyter: Berlin, Fed. Rep. Ger.
CODEN: 50NHAH
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The effect of reduced folates in reversing methotrexate (I) [59-05-2] cytotoxicity was studied in human fibroblasts. Preincubation of fibroblasts with folinic acid (II) [58-05-9] protected the cells from the cytotoxic effects of I. In fibroblasts in which DNA synthesis was

inhibited by I as a result of methotrexate polyglutamate [**82334-40-5**] formation, II addn. to the culture medium did not reverse the cytotoxic effect of I. Thus, II present along with I in the preincubation medium acted differently from II added to these cells once the effects of I were established.

L20 ANSWER 50 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:449382 HCAPLUS
DOCUMENT NUMBER: 97:49382
TITLE: Polymeric derivatives based on cis-diamminedichloroplatinum(II) as antineoplastic agents
AUTHOR(S): Carraher, Charles E., Jr.; Scott, William J.; Lopez, Isabel; Cerutis, Delie Roselyn; Manek, Tushar; Giron, David J.
CORPORATE SOURCE: Dep. Chem., Wright State Univ., Dayton, OH, 45435, USA
SOURCE: ACS Symposium Series (1982), 186(Biol. Act. Polym.), 221-31
CODEN: ACSMC8; ISSN: 0097-6156
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Platinum polyamines were synthesized through reaction of salts of PtX4-2 with diamines. The polyamines showed good antineoplastic activity against a wide range of tumors including mouse connective tissues, human cervical carcinoma, and human amnion cancer cells. Further, the vast majority of the polyamines successfully altered the normal replication cycle of the polio virus Type 1 and Encephalomyocarditic virus, strain MM when the former cells were treated with the virus, without destruction of the cells themselves. Mice were able to tolerate large doses of the polyamines.
IT **82385-25-9**
RL: BIOL (Biological study)
(**neoplasm-inhibitory** and virucidal activities of)

L20 ANSWER 51 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1982:416781 HCAPLUS
DOCUMENT NUMBER: 97:16781
TITLE: Antitumor effect of RNases modified by covalent binding with dextran m-aminobenzyloxymethyl ether
AUTHOR(S): Kurinenko, B. M.; Kladova, M. S.; Penzikova, G. A.; Oreshina, M. G.; Bulgakova, R. Sh.
CORPORATE SOURCE: Kazan. Univ., Kazan, USSR
SOURCE: Antibiotiki (Moscow) (1982), 27(5), 336-41
CODEN: ANTBAL; ISSN: 0003-5637
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB In mice, pancreatic RNase (EC 3.1.4.22) [9001-99-4] had greater antitumor activity than Actinomyces rimosus RNase (EC 3.1.4.8) [9026-12-4] did. Dextran m-aminobenzyloxymethyl ether-modified RNases had greater antitumor activity than did the native RNases. The antitumor activity of the various RNases was pos. correlated with their stability. The effective RNase activity in the ascitic fluid also pos. correlated with the antitumor activity of the enzymes. Factors affecting the in vivo antitumor and RNase activity of the various enzyme prepns. are discussed.
IT **65879-82-5D**, reaction products with RNase
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**neoplasm-inhibiting** activity of)

L20 ANSWER 52 OF 59 HCAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1981:490846 HCAPLUS
DOCUMENT NUMBER: 95:90846
TITLE: Treatment of Reuber H35 hepatoma cells with carrier-bound methotrexate
AUTHOR(S): Whiteley, John M.; Nimec, Zenia; Galivan, John
CORPORATE SOURCE: Dep. Biochem., Scripps Clin. and Res. Found., La Jolla, CA, 92037, USA
SOURCE: Molecular Pharmacology (1981), 19(3), 505-8
CODEN: MOPMA3; ISSN: 0026-895X
DOCUMENT TYPE: Journal
LANGUAGE: English
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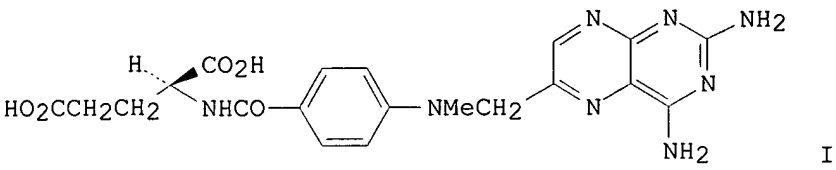

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AB Methotrexate (MTX)(I) [59-05-2], 40 .mu.M, covalently linked to bovine serum albumin (BSA), was ineffective in suppressing the growth of an MTX transport-resistant strain of Reuber hepatoma H35 cells (I50(MTX) .apprx. 3.5 .mu.M). However, conjugation of MTX with poly(L-lysine) led to cell growth repression at levels of <0.1 .mu.M. Both the parent H35 line and transport-resistant sublines showed a similar response to treatment with MTX[poly(L-lysine)] [68378-41-6] (I50 .apprx. 70 nM). Depressed cell growth after drug treatment of the H35 cells and the resistant sublines could be partially reversed by treatment with thymidine/hypoxanthine. Addnl., folinic acid was effective for preventing MTX[poly(L-lysine)] toxicity in H35 cells but could not do so for the MTX transport deficient sublines, presumably because of its inability to enter the cells. These data are consistent with the proposal that MTX[poly(L-lysine)] is toxic to both cell lines via a blockade of the one-carbon metabolic pathway.
IT **68378-41-6 78729-90-5**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**neoplasm inhibition** by)

L20 ANSWER 53 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1981:16146 HCAPLUS
DOCUMENT NUMBER: 94:16146
TITLE: Poly(cis-dihalodiamine platinum(II)) compounds: synthesis and biological activity
AUTHOR(S): Carraher, Charles E., Jr.; Scott, William J.; Schroeder, Jack A.; Giron, David J.
CORPORATE SOURCE: Dep. Chem., Wright State Univ., Dayton, OH, 45435, USA
SOURCE: Journal of Macromolecular Science, Chemistry (1981), A15(4), 625-31
CODEN: JMCHBD; ISSN: 0022-233X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Poly(cis-dihalodiamine platinum(II)) compds. are synthesized through soln. condensation of tetrahaloplatinum(II) salts with diamines. Preliminary testing of five of these polymers shows that several affect virus and

bacterial replication, and that all are toxic to HeLa (human) and L929 (mouse) tumor cells at concns. >300 .mu.g/mL but are apparently nontoxic to mice at doses of .ltoreq.400 .mu.g.

IT **76033-48-2P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of, as **neoplasm inhibitors**, bactericides and virucides)

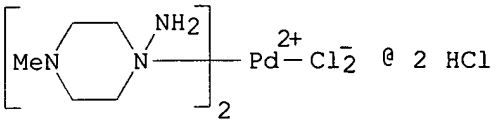
L20 ANSWER 54 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:608381 HCAPLUS
DOCUMENT NUMBER: 91:208381
TITLE: Demonstration of a high affinity folate binder in human cell membranes and its characterization in cultured human KB cells
AUTHOR(S): McHugh, Mary; Cheng, Yung-Chi
CORPORATE SOURCE: Grace Cancer Drug Cent., Roswell Park Mem. Inst., Buffalo, NY, 14263, USA
SOURCE: Journal of Biological Chemistry (1979), 254(22), 11312-18
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The presence of a high-affinity folate binder was demonstrated in the membrane fractions from human cells grown in culture as well as in peripheral lymphoblasts obtained from **leukemia** patients. Particularly high binder levels were detected in KB cells and this level could be increased by growing KB cells in medium contg. a max. of 2 nM folate (D medium) rather than the std. 2 .mu.M folate (R medium). The sites in intact cells increased with the length of time the cells had been grown in D medium, with a max. binding capacity attained after 60 days. This increase in free binder correlated with an increased uptake of pteroylglutamate (PteGlu). In cells prelabeled for 16 h with 0.5 .mu.M PteGlu-3H was found assocd. with all cellular membranes. The radioactivity per 108 cells was the highest in plasma membrane-outer nuclear membrane and decreased in the following order: postmitochondrial membrane > inner nuclear membrane > mitochondrial membrane. In terms of specific radioactivity (nanomoles of PteGlu-3H bound/mg protein), mitochondria appeared to be the richest source of binder, possessing .gtoreq.2.5 times more binder than the other cell fractions. Scatchard plot anal. of a crude membrane fraction from KB cells revealed a binding const. of 0.5-0.6 nM Pte-Glu. This value was the same for membrane derived from cells grown in either D medium or R medium. Various folate derivs. were examd. for their ability to **inhibit** binding of PteGlu-3H to membranes in intact cells as well as in NP-40-solubilized membrane prepns. **Inhibitor** potency depended on an intact folate structure and, with solubilized binder, 10-methylpteroylglutamate was the most potent followed by dihydropteroylglutamate tetrahydropteroylglutamate, and PteGlu.

IT **32108-06-8**
RL: BIOL (Biological study)
(folate binding **inhibition** by, KB cells and KB membranes)

L20 ANSWER 55 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:568350 HCAPLUS
DOCUMENT NUMBER: 91:168350
TITLE: Coordination compounds with potential antitumor effect. Part I. Platinum and palladium complexes with amine ligands
AUTHOR(S): Maurer, Ana; Topciu, Vladimir; Csaki, Nicolae

CORPORATE SOURCE: Inst. Cent. Chim., Bucharest, Rom.
SOURCE: Revistade Chimie (Bucharest, Romania) (1979), 30(4), 321-6
CODEN: RCBUAU; ISSN: 0034-7752
DOCUMENT TYPE: Journal
LANGUAGE: Romanian
GI



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AB Seventeen coordination compds. of Pd and Pt with amine ligands were prepd. by the reaction of K2Cl4Pd or K2Cl4Pt with the appropriate amine (hydrazine or heterocycle amine). In in vitro tests on Escherichia coli, cis-dichlorobis(hydrazinium)platinum(2+) dichloride [71534-19-5] and its Pd analog [71534-15-1] produced deformed cells similar to the ones obtained after treatment with methotrexate. In in vivo tests against Ehrlich ascites tumor in mice, the Pt dichloride and cis-dichloro(1-amino-4-methylpiperazinium)palladium(2+) dichloride (I) [71534-16-2] controlled the tumor at the incipient stage only. In general the complexes were not toxic, the LD50 values were >160 mg/kg.

IT **71534-03-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and **neoplasm-inhibiting** activity of)

L20 ANSWER 56 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:457853 HCAPLUS
DOCUMENT NUMBER: 91:57853
TITLE: Water-soluble homo- or copolymers of unsaturated mono- or polyhydroxy compounds with antitumor activity
INVENTOR(S): Wolf, Gerhard Dieter; Bierling, Robert; Schmidt, Delf
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 53 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2740081	A1	19790315	DE 1977-2740081	19770906
JP 53099334	A2	19780830	JP 1978-11579	19780206
JP 61036494	B4	19860819		
CH 633963	A	19830114	CH 1978-1298	19780206
NL 7801402	A	19780810	NL 1978-1402	19780207
NL 175968	B	19840903		
NL 175968	C	19850201		
FR 2379286	A1	19780901	FR 1978-3361	19780207
FR 2379286	B1	19800829		
GB 1569962	A	19800625	GB 1978-4879	19780207

ES 466774	A1	19790601	ES 1978-466774	19780208
AT 7800866	A	19800915	AT 1978-866	19780208
AT 362146	B	19810427		
PRIORITY APPLN. INFO.:			DE 1977-2705189	19770208
			DE 1977-2740081	19770906
			DE 1977-2740082	19770906

AB The title polymers with repeating units [-(CH2CRR1)pXqX1r-] (R = CH2OR2, H, Me; R1 = CH2OR2, CH(OR2)CH2OR2, CO2CHR3CH2OR2; R2 = H, acyl, carbamoyl; R3 = H, Me; X, X1 = comonomer moieties; p = 30-100 mol %; q, r = 0-70 mol %) were prepd. Thus, CH2:C(CH2OAc)2 was copolymd. with maleic anhydride to give 97% copolymer, which was sapond. to give 97.8% [-CH2C(CH2OH)2CH(CO2Na)CH(CO2Na)-]n (I). At 50 mg/kg i.m. 7 days after infection I caused a 70% **inhibition** of **sarcoma** 180 development.

IT **68045-71-6P 68045-72-7DP**, sapond. **70956-79-5P**
RL: PREP (Preparation)
(prepn. of, for **neoplasm inhibitors**)

L20 ANSWER 57 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:661 HCAPLUS
DOCUMENT NUMBER: 90:661
TITLE: Composition with antitumor action, containing at least one water-soluble polymer of 1,3-dihydroxy-2-methylenepropane or its derivatives
INVENTOR(S): Wolf, Gerhard Dieter; Bierling, Robert; Schmidt, Delf
PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 39 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2705189	A1	19780817	DE 1977-2705189	19770208
DE 2705189	C2	19861211		
JP 53099334	A2	19780830	JP 1978-11579	19780206
JP 61036494	B4	19860819		
CH 633963	A	19830114	CH 1978-1298	19780206
NL 7801402	A	19780810	NL 1978-1402	19780207
NL 175968	B	19840903		
NL 175968	C	19850201		
FR 2379286	A1	19780901	FR 1978-3361	19780207
FR 2379286	B1	19800829		
GB 1569962	A	19800625	GB 1978-4879	19780207
BE 863753	A1	19780808	BE 1978-184991	19780208
ES 466774	A1	19790601	ES 1978-466774	19780208
AT 7800866	A	19800915	AT 1978-866	19780208
AT 362146	B	19810427		
PRIORITY APPLN. INFO.:			DE 1977-2705189	19770208
			DE 1977-2740081	19770906
			DE 1977-2740082	19770906

AB Antineoplastic pharmaceuticals comprise as active agents H2O-sol. homo- or copolymers of 1,3-dihydroxy-2-methylenepropane having repeating units [CH2C(CH2OR)2] or [CH2C(CH2OR)2]n(Z)m] or [(Y)p[CH2C(CH2OR2]q(Z)r] where R = H, CO-alkyl, CO-cycloalkyl, CO-aryl, CONH2, CONH-alkyl, or CONH-aryl; Y and Z = units of monomers copolymerizable with 1,3-dihydroxy-2-methylenepropane; n = 30-99 mol%; m = 1-70 mol%; 30-99 mol%; p = 1-65

mol%, and r = 65-1 mol%. For example, 430 parts 1,3-diacetoxy-2-methylenepropane and 245 parts maleic anhydride were mixed in 1200 parts (vol.) EtOAc in the presence of 15 parts tert-Bu peroctoate, and the reaction mixt. was stirred for 6 h at 80.degree., cooled, and sprayed into 3000 parts (vol.) benzene to give a 97% yield of 1,3-diacetoxy-2-methylenepropane-maleic anhydride copolymer (I) [55615-57-1]. I was sprayed in MeOH with NaOH to give 97.8% yield of 1,3-diacetoxy-2-methylenepropane-disodium maleate copolymer (II) [68045-73-8]. I.p. administration of 50 mg II/kg at 7 days after or i.m. administration of 50 mg II/kg at 7 days after inoculation of mice with ascites sarcoma cells induced a definite antineoplastic effect observable after 28 days.

IT **68045-71-6P 68045-72-7P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. of, as **neoplasm inhibitor**)

L20 ANSWER 58 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1978:115178 HCAPLUS
DOCUMENT NUMBER: 88:115178
TITLE: Antitumor effect of Serratia marcescens nuclease covalently bound to soluble dextran
AUTHOR(S): Kurinenko, B. M.; Belyaeva, M. I.; Cherepneva, I. E.; Viesture, Z.
CORPORATE SOURCE: Kazan State Univ., Kazan, USSR
SOURCE: Voprosy Onkologii (1977), 23(11), 94-8
CODEN: VOONAW; ISSN: 0507-3758
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB Serratia marcescens nuclease (E.C. 3.1.4.9) [9025-65-4] diazocoupled with m-aminobenzyloxymethyldextran [**65879-82-5**] (mol. wt. 20,000, 40,000, and 60,000 daltons) was 3-4 times as effective as the native enzyme as an **inhibitor** of Ehrlich ascites **carcinoma** in mice. The enzyme prepn. using dextran with a mol. wt. of 40,000 daltons produced the greatest **neoplasm inhibition**.

IT **65879-82-5D**, reaction products with Serratia marcescens nuclease
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**neoplasm inhibition** by)

L20 ANSWER 59 OF 59 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1977:150519 HCAPLUS
DOCUMENT NUMBER: 86:150519
TITLE: Polymeric substances in tumor chemotherapy
AUTHOR(S): Zubova, O. V.; Kirsh, Yu. E.; Silaev, A. B.
CORPORATE SOURCE: Moscow, USSR
SOURCE: Tezisy Dokl. - Vses. Konf. Khimioter. Zlokach. Opukholei, 2nd (1974), 84-5. Editor(s): Astrakhan, V. I. Akad. Med. Nauk SSSR: Moscow, USSR.
CODEN: 34YKAH
DOCUMENT TYPE: Conference
LANGUAGE: Russian

AB Sixty-nine poly(4-vinylpyridine) prepns. of different mol. wts. and contg. different amts. of adsorbed sarcolysin were given i.p. daily to tumor-bearing mice at 10% the LD50. The prepns. had an LD50 of 42-250 mg/kg, in contrast to 20 mg/kg for sarcolysin. Many of the prepns. cured 4-9 times more animals with Ehrlich carcinoma, sarcoma 37, or lympholeukosis NK/Ly, or prolonged their lives 4-5 times, more, than did

sarcolysin alone. Alkylation of the polymer had no effect on its antitumor activity, either with or without sarcolysin. Higher mol. wt. polymers tended to be more active than low mol. wt. polymers. None of the prepns. affected the gastrointestinal tract.

IT **62586-24-7**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neoplasm inhibitors)

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http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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(62238-85-1/RN)
1 105055-03-6/BI
(105055-03-6/RN)
1 114464-18-5/BI
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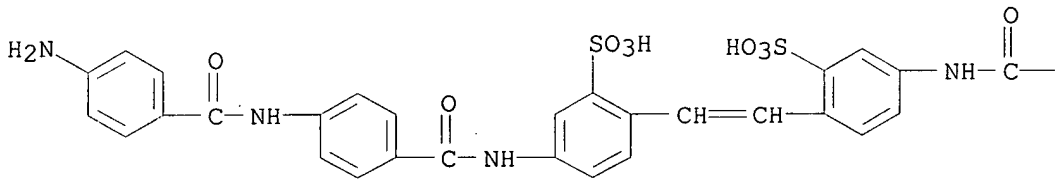
L21 ANSWER 1 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-38-5** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 5-[(4-aminobenzoyl)amino]-2-[2-[4-[[4-[(4-aminobenzoyl)amino]benzoyl]amino]-2-sulfophenyl]ethenyl]benzenesulfonic acid (9CI) (CA INDEX NAME)
MF C35 H29 N5 O9 S2 . x (C2 H4 O)n H2 O
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 241483-37-4
CMF C35 H29 N5 O9 S2

PAGE 1-A



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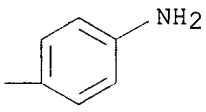
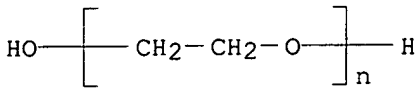


CM 2

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS

Searched by M. Smith



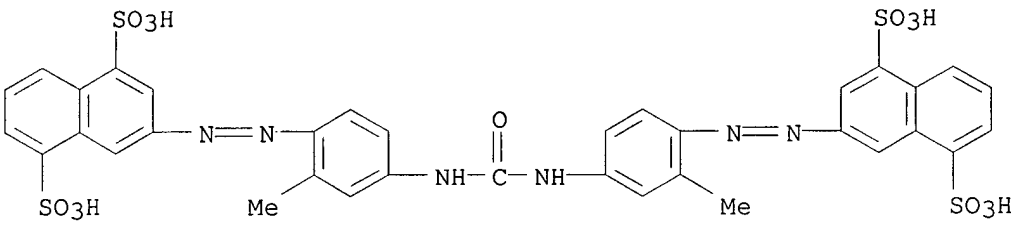
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 2 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-36-3** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 3,3'-[carbonylbis[imino(2-methyl-4,1-phenylene)azo]]bis[1,5-naphthalenedisulfonic acid], sodium salt (9CI) (CA INDEX NAME)
MF C35 H28 N6 O13 S4 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

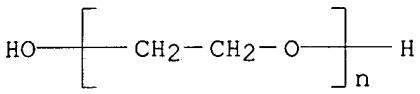
CM 1

CRN 25738-24-3
CMF C35 H28 N6 O13 S4



CM 2

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

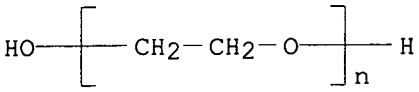
L21 ANSWER 3 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-35-2** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with

2-[(2-hydroxy-1-naphthalenyl)azo]-5-[(4-sulfophenyl)azo]benzenesulfonic acid, sodium salt (9CI) (CA INDEX NAME)

MF C22 H16 N4 O7 S2 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

CRN 25317-38-8
CMF C22 H16 N4 O7 S2

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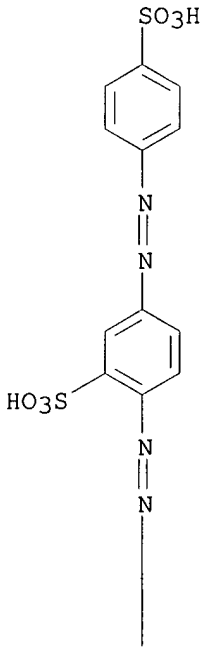

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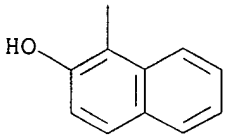


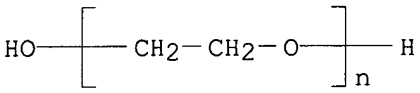
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 4 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-34-1** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 4-[(2,4-dimethylphenyl)azo]-3-hydroxy-2,7-naphthalenedisulfonic acid, sodium salt (9CI) (CA INDEX NAME)
MF C18 H16 N2 O7 S2 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

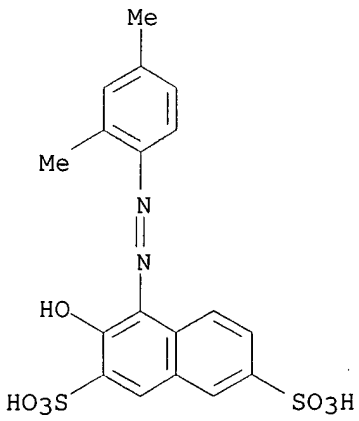
CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

CRN 7481-49-4
CMF C18 H16 N2 O7 S2



Searched by M. Smith

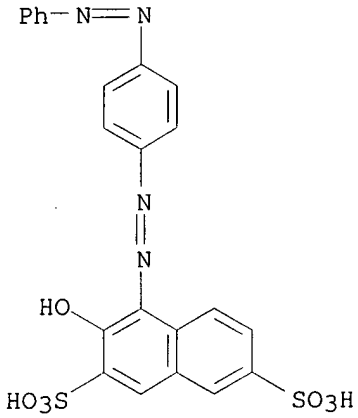
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 5 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-33-0** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 3-hydroxy-4-[[4-(phenylazo)phenyl]azo]-2,7-naphthalenedisulfonic acid, sodium salt (9CI) (CA INDEX NAME)
MF C22 H16 N4 O7 S2 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

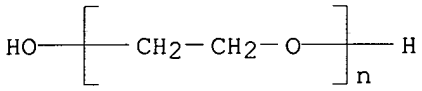
CM 1

CRN 70693-53-7
CMF C22 H16 N4 O7 S2



CM 2

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

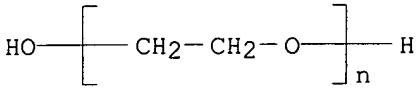
REFERENCE 1: 131:194281

L21 ANSWER 6 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-32-9** REGISTRY

CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 3-hydroxy-4-[[2-sulfo-4-[(4-sulfophenyl)azo]phenyl]azo]-2,7-naphthalenedisulfonic acid, sodium salt (9CI) (CA INDEX NAME)
MF C22 H16 N4 O13 S4 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

CRN 25317-44-6
CMF C22 H16 N4 O13 S4

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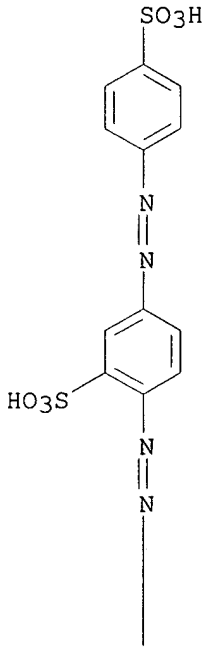
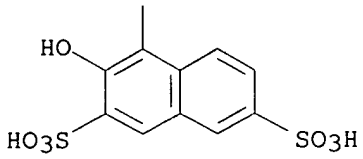


Searched by M. Smith

PAGE 2-A



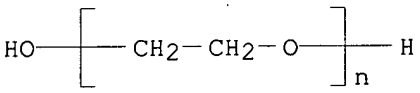
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 7 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-31-8** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-2,7-naphthalenedisulfonic acid], sodium salt (9CI) (CA INDEX NAME)
MF C34 H28 N6 O14 S4 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



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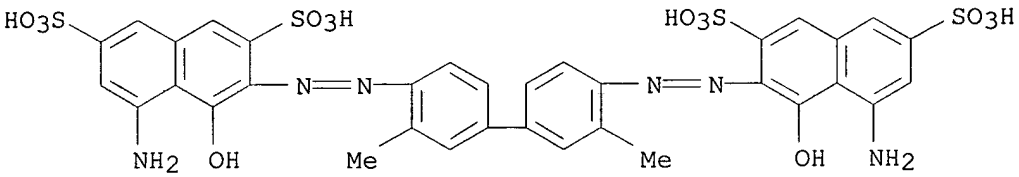


1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

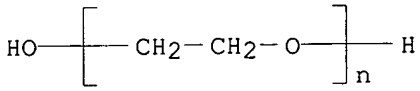
REFERENCE 1: 131:194281

L21 ANSWER 8 OF 69 REGISTRY COPYRIGHT 2002 ACS

RN **241483-30-7** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 6,6'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[4-amino-5-hydroxy-1,3-naphthalenedisulfonic acid], sodium salt (9CI) (CA INDEX NAME)
MF C34 H28 N6 O14 S4 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

CRN 6968-33-8
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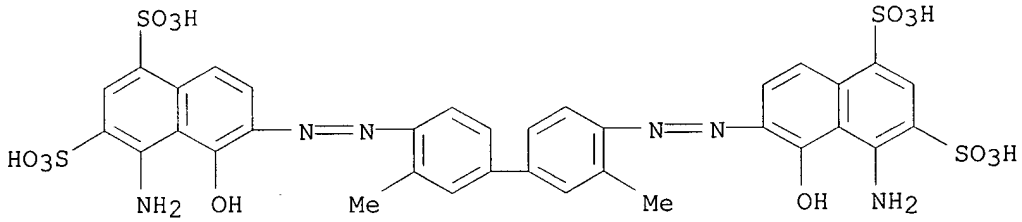


1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

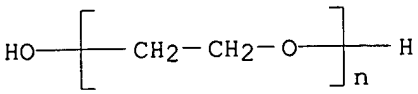
REFERENCE 1: 131:194281

L21 ANSWER 9 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-29-4** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 7,7'-(carbonyldiimino)bis[4-hydroxy-3-[[2-sulfo-4-[(4-sulfophenyl)azo]phenyl]azo]-2-naphthalenesulfonic acid], sodium salt (9CI) (CA INDEX NAME)
MF C45 H32 N10 O21 S6 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O

CCI PMS



CM 2

CRN 25188-41-4
CMF C45 H32 N10 O21 S6

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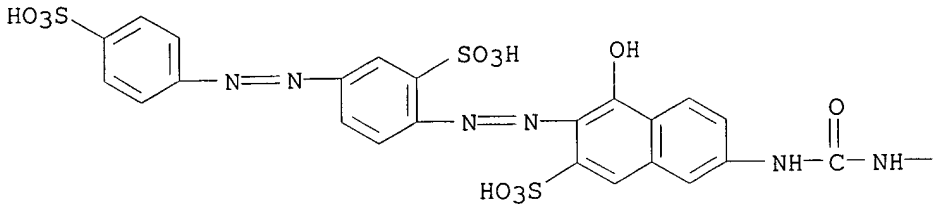

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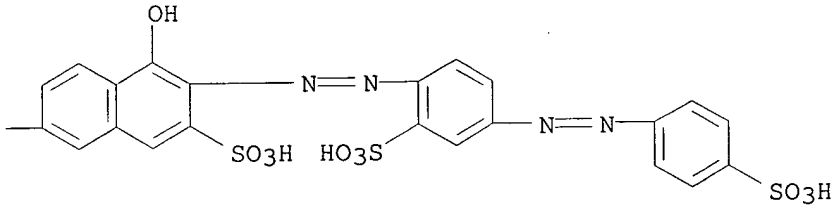

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 10 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-28-3** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 5,5'-[carbonylbis[imino(2-sulfo-4,1-phenylene)azo]]bis[6-amino-4-hydroxy-2-naphthalenesulfonic acid], sodium salt (9CI) (CA INDEX NAME)
MF C33 H26 N8 O15 S4 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

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CRN 70253-90-6
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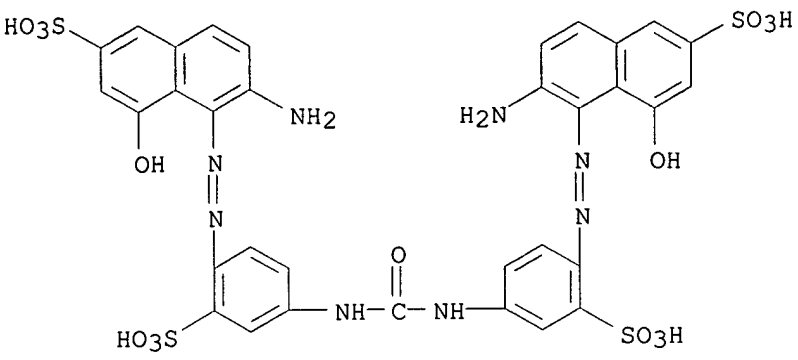
Searched by M. Smith



CM 2

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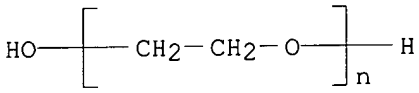
CMF (C2 H4 O)n H2 O
CCI PMS



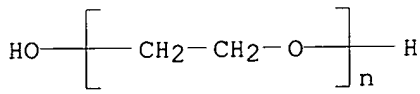
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 11 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-27-2** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-, ester with 3-[[4-[[4-[(6-amino-1-hydroxy-3-sulfo-2-naphthalenyl)azo]-6-sulfo-1-naphthalenyl]azo]-1-naphthalenyl]azo]-1,5-naphthalenedisulfonic acid, sodium salt (9CI) (CA INDEX NAME)
MF C40 H27 N7 O13 S4 . x (C2 H4 O)n H2 O . x Na
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

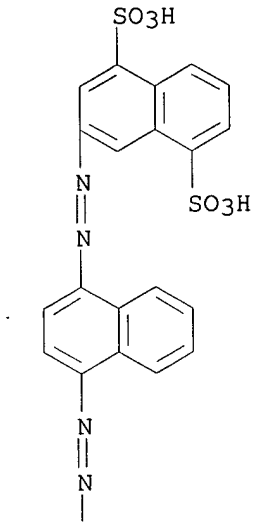
CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



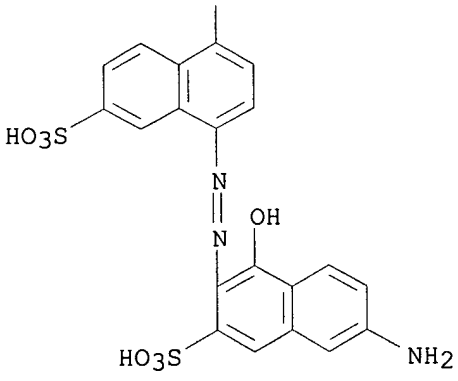
CM 2

CRN 25255-02-1
CMF C40 H27 N7 O13 S4

PAGE 1-A



PAGE 2-A



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 12 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **241483-26-1** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-hydro-.omega.-hydroxy-,

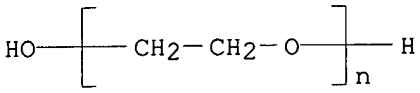
Searched by M. Smith

8,8'-[carbonylbis[imino-3,1-phenylenecarbonylimino(4-methyl-3,1-phenylene)carbonylimino]]bis[1,3,5-naphthalenetrisulfonate] (9CI) (CA INDEX NAME)

OTHER NAMES:
CN Suramin PEG ester
MF C51 H40 N6 O23 S6 . x (C2 H4 O)n H2 O
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

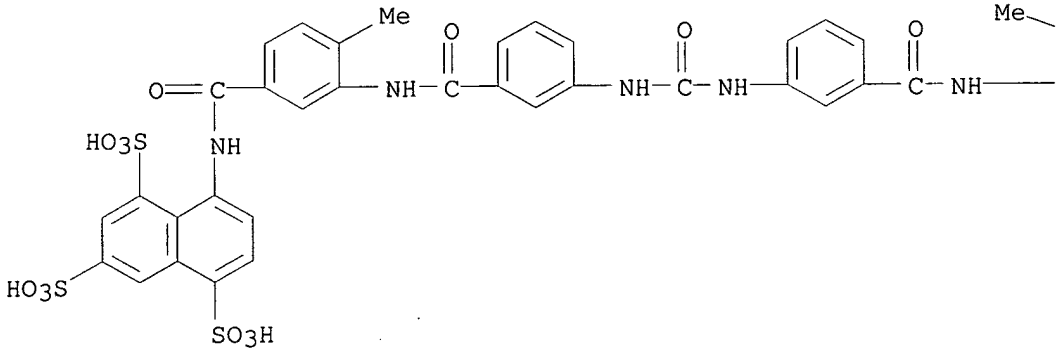
CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

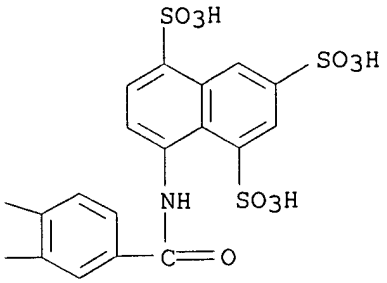
CRN 145-63-1
CMF C51 H40 N6 O23 S6

PAGE 1-A



Searched by M. Smith

PAGE 1-B



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:194281

L21 ANSWER 13 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **228705-68-8** REGISTRY
CN Glycine, N-(2-methyl-1-oxo-2-propenyl)glycylphenylalanyl-L-leucyl-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-(2-methyl-1-oxo-2-propenyl)glycylphenylalanyl-L-leucylglycine 4-nitrophenyl ester (9CI)
FS PROTEIN SEQUENCE; STEREOSEARCH
DR 467442-53-1
MF (C29 H35 N5 O8 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

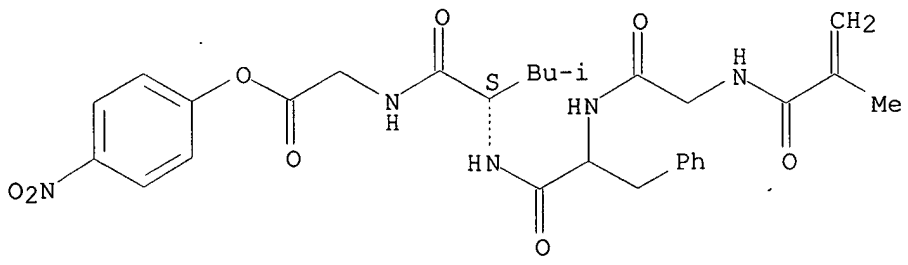
RELATED SEQUENCES AVAILABLE WITH SEQLINK

CM 1

CRN 213338-44-4
CMF C29 H35 N5 O8

RELATED SEQUENCES AVAILABLE WITH SEQLINK

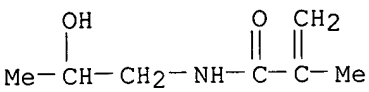
Absolute stereochemistry.



Searched by M. Smith

CM 2

CRN 21442-01-3
CMF C7 H13 N O2



11 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
11 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:315908

REFERENCE 2: 137:299744

REFERENCE 3: 137:226246

REFERENCE 4: 136:330459

REFERENCE 5: 136:330421

REFERENCE 6: 135:262094

REFERENCE 7: 134:13801

REFERENCE 8: 133:79138

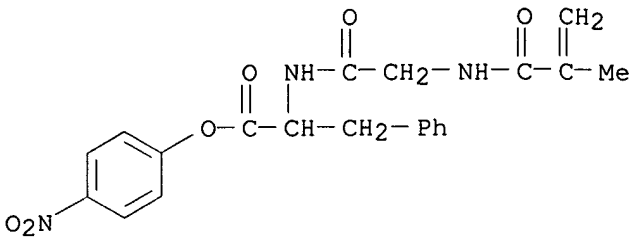
REFERENCE 9: 132:298650

REFERENCE 10: 132:284054

L21 ANSWER 14 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **228705-67-7** REGISTRY
CN Phenylalanine, N-(2-methyl-1-oxo-2-propenyl)glycyl-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-(2-methyl-1-oxo-2-propenyl)glycylphenylalanine 4-nitrophenyl ester (9CI)
MF (C21 H21 N3 O6 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
SR CA
LC STN Files: CA, CAPLUS

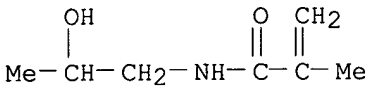
CM 1

CRN 228705-55-3
CMF C21 H21 N3 O6



CM 2

CRN 21442-01-3
CMF C7 H13 N O2



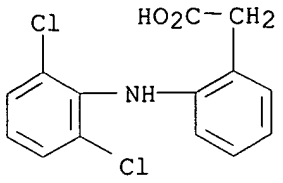
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 131:73948

L21 ANSWER 15 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **176982-08-4** REGISTRY
CN Hyaluronic acid, mixt. with 2-[(2,6-dichlorophenyl)amino]benzeneacetic acid monosodium salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzeneacetic acid, 2-[(2,6-dichlorophenyl)amino]-, monosodium salt, mixt. contg. (9CI)
OTHER NAMES:
CN HYAL EX 0001
MF C14 H11 Cl2 N O2 . Na . Unspecified
CI MXS
SR CA
LC STN Files: CA, CAPLUS, DRUGNL, DRUGUPDATES, TOXCENTER

CM 1

CRN 15307-79-6 (15307-86-5)
CMF C14 H11 Cl2 N O2 . Na



● Na

CM 2

CRN 9004-61-9
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

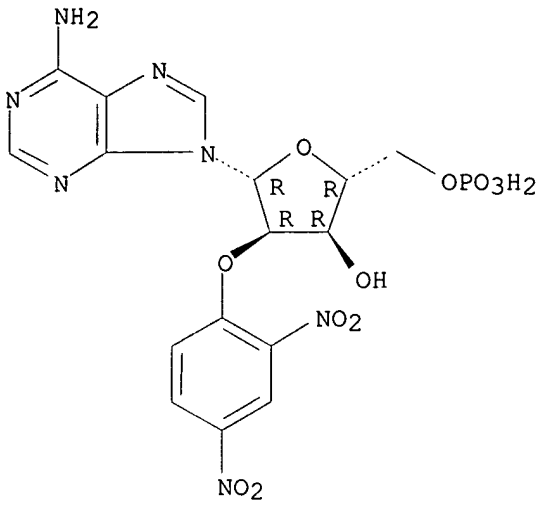
REFERENCE 1: 125:757

L21 ANSWER 16 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **165281-56-1** REGISTRY
CN 5'-Adenylic acid, 2'-O-(2,4-dinitrophenyl)-, homopolymer (9CI) (CA INDEX NAME)
FS STEREOSEARCH
MF (C16 H16 N7 O11 P)x
CI PMS
PCT Polynucleotide
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL

CM 1

CRN 165281-55-0
CMF C16 H16 N7 O11 P

Absolute stereochemistry.



6 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
6 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:365972

REFERENCE 2: 130:129955

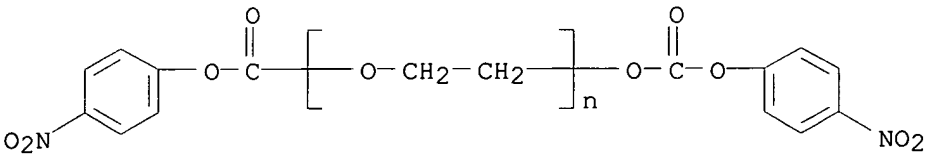
REFERENCE 3: 125:321415

REFERENCE 4: 125:265088

REFERENCE 5: 124:3639

REFERENCE 6: 123:78778

L21 ANSWER 17 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **150673-50-0** REGISTRY
CN Poly(oxy-1,2-ethanediyl), .alpha.-[(4-nitrophenoxy)carbonyl]-.omega.-[[(4-nitrophenoxy)carbonyl]oxy]- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Polyethylene glycol bis(4-nitrophenyl carbonate)
MF (C2 H4 O)n C14 H8 N2 O9
CI PMS
PCT Polyether
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPATFULL



23 REFERENCES IN FILE CA (1962 TO DATE)

Searched by M. Smith

6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
23 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 136:189230

REFERENCE 2: 136:81958

REFERENCE 3: 136:11293

REFERENCE 4: 135:294022

REFERENCE 5: 135:157506

REFERENCE 6: 134:212784

REFERENCE 7: 134:204694

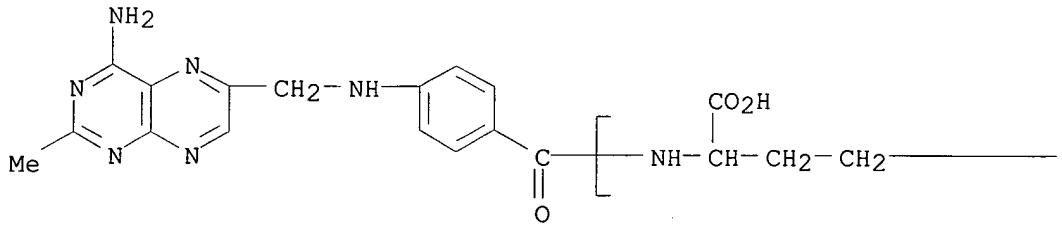
REFERENCE 8: 134:197930

REFERENCE 9: 133:278162

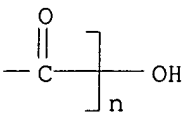
REFERENCE 10: 133:206865

L21 ANSWER 18 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **142200-39-3** REGISTRY
CN Poly[imino(1-carboxy-4-oxo-1,4-butanediyl)], .alpha.-[4-[[(4-amino-2-methyl-6-pteridinyl)methyl]amino]benzoyl]-.omega.-hydroxy-, (S)- (9CI) (CA INDEX NAME)
MF (C5 H7 N O3)n C15 H14 N6 O2
CI PMS
PCT Polyamine
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

PAGE 1-A



PAGE 1-B

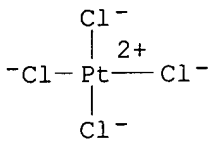


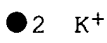
Searched by M. Smith

CI PMS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

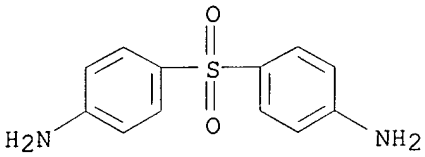
CRN 10025-99-7 (13965-91-8)
CMF Cl4 Pt . 2 K
CCI CCS





CM 2

CRN 80-08-0
CMF C12 H12 N2 O2 S



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 114:220758

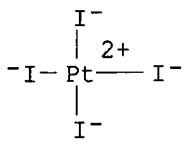
REFERENCE 2: 112:159357

L21 ANSWER 22 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **126250-00-8** REGISTRY
CN L-Glutamic acid, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, polymer with dipotassium (SP-4-1)-tetraiodoplatinate(2-) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Platinate(2-), tetraiodo-, dipotassium, (SP-4-1)-, polymer with N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamic acid (9CI)
FS STEREOSEARCH
MF (C20 H22 N8 O5 . I4 Pt . 2 K)x
CI PMS
PCT Polyamide, Polyamide formed, Polyamine, Polyother
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 14708-56-6 (14349-66-7)
CMF I4 Pt . 2 K
CCI CCS

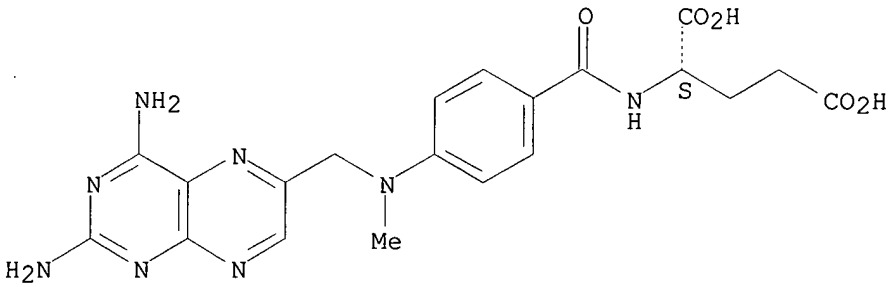


2 K^+

CM 2

CRN 59-05-2
CMF C20 H22 N8 O5

Absolute stereochemistry.



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 114:220758

REFERENCE 2: 112:159357

L21 ANSWER 23 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **125718-18-5** REGISTRY
CN L-Glutamic acid, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, polymer with formaldehyde (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Formaldehyde, polymer with N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamic acid (9CI)
FS STEREOSEARCH
MF (C20 H22 N8 O5 . C H2 O)x
CI PMS
PCT Amino resin, Polyamide, Polyamide formed, Polyamine

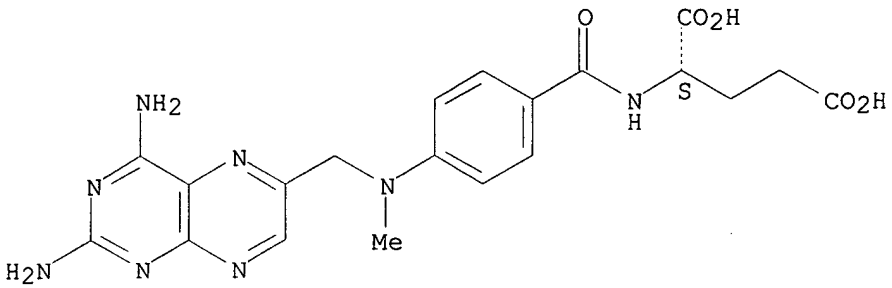
Searched by M. Smith

SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 59-05-2
CMF C20 H22 N8 O5

Absolute stereochemistry.



CM 2

CRN 50-00-0
CMF C H2 O

$H_2C{=}O$

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

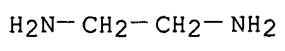
REFERENCE 1: 112:125218

L21 ANSWER 24 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **125718-17-4** REGISTRY
CN L-Glutamic acid, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, polymer with 1,2-ethanediamine and formaldehyde (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,2-Ethanediamine, polymer with N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamic acid and formaldehyde (9CI)
CN Formaldehyde, polymer with N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamic acid and 1,2-ethanediamine (9CI)
FS STEREOSEARCH
MF (C20 H22 N8 O5 . C2 H8 N2 . C H2 O)x
CI PMS
PCT Amino resin, Polyamide, Polyamide formed, Polyamine
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 107-15-3

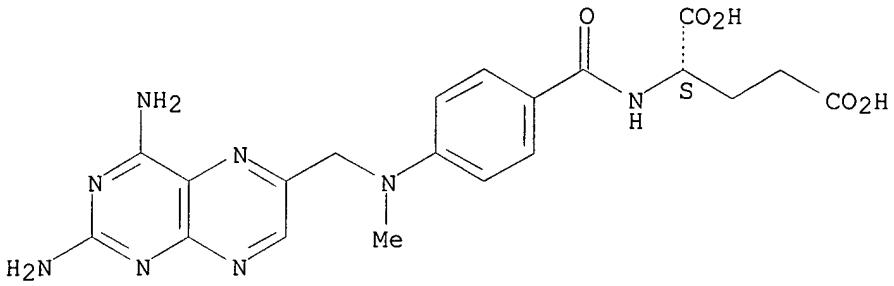
CMF C2 H8 N2



CM 2

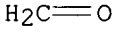
CRN 59-05-2
CMF C20 H22 N8 O5

Absolute stereochemistry.



CM 3

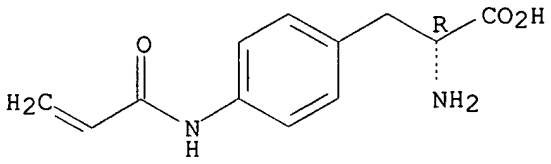
CRN 50-00-0
CMF C H2 O



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 112:125219

L21 ANSWER 25 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **118309-41-4** REGISTRY
CN Poly[imino(1-carboxy-4-oxo-1,4-butanediyl)], .alpha.-[4-[[(2-amino-1,4-dihydro-4-oxo-6-quinazolinyl)methyl]-2-propynylamino]benzoyl]-.omega.-hydroxy-, (S)- (9CI) (CA INDEX NAME)
MF (C5 H7 N O3)n C19 H16 N4 O3
CI PMS
PCT Polyamine
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 109:23355

REFERENCE 2: 106:120194

L21 ANSWER 29 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **105055-03-6** REGISTRY
CN Glycine, N-[N-[N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-L-phenylalanyl]-L-leucyl]-, 4-nitrophenyl ester, polymer with (S)-4-hydroxy-.alpha.-[(2-methyl-1-oxo-2-propenyl)amino]benzenepropanamide and N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with (S)-4-hydroxy-.alpha.-[(2-methyl-1-oxo-2-propenyl)amino]benzenepropanamide and N-[N-[N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-L-phenylalanyl]-L-leucyl]glycine 4-nitrophenyl ester (9CI)
CN Benzenepropanamide, 4-hydroxy-.alpha.-[(2-methyl-1-oxo-2-propenyl)amino]-, (S)-, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide and N-[N-[N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-L-phenylalanyl]-L-leucyl]glycine 4-nitrophenyl ester (9CI)
FS PROTEIN SEQUENCE; STEREOSEARCH
MF (C29 H35 N5 O8 . C13 H16 N2 O3 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

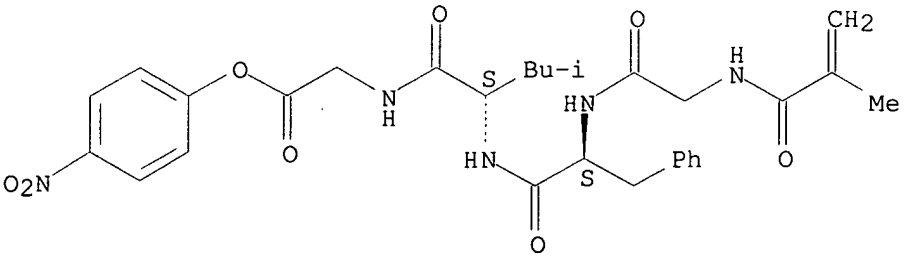
RELATED SEQUENCES AVAILABLE WITH SEQLINK

CM 1

CRN 100424-71-3
CMF C29 H35 N5 O8

RELATED SEQUENCES AVAILABLE WITH SEQLINK

Absolute stereochemistry.

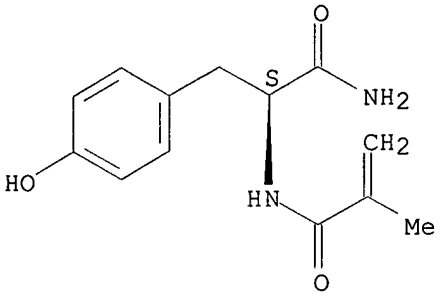


Searched by M. Smith

CM 2

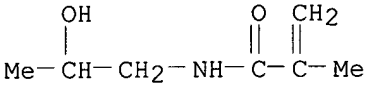
CRN 91147-51-2
CMF C13 H16 N2 O3

Absolute stereochemistry.



CM 3

CRN 21442-01-3
CMF C7 H13 N O2



5 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
5 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 122:64325

REFERENCE 2: 112:91317

REFERENCE 3: 109:327

REFERENCE 4: 107:141105

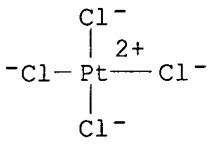
REFERENCE 5: 106:207295

L21 ANSWER 30 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **102857-78-3** REGISTRY
CN L-Glutamic acid, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, polymer with dipotassium (SP-4-1)-tetrachloroplatinate(2-) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Platinate(2-), tetrachloro-, dipotassium, (SP-4-1)-, polymer with N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamic acid (9CI)
OTHER NAMES:
CN Methotrexate-potassium tetrachloroplatinate copolymer

FS STEREOSEARCH
MF (C20 H22 N8 O5 . Cl4 Pt . 2 K)x
CI PMS
PCT Polyamide, Polyamide formed, Polyamine, Polyother
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 10025-99-7 (13965-91-8)
CMF Cl4 Pt . 2 K
CCI CCS

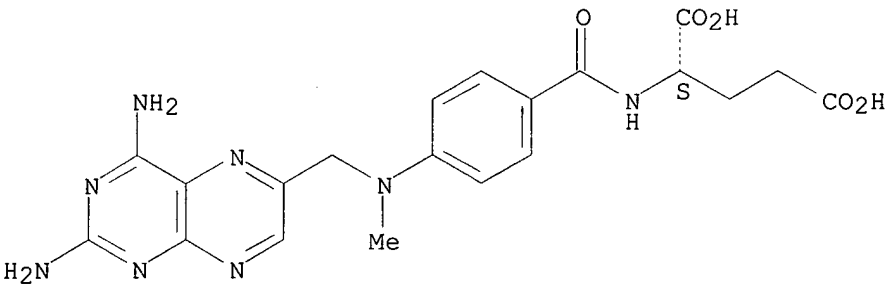


2 K^+

CM 2

CRN 59-05-2
CMF C20 H22 N8 O5

Absolute stereochemistry.



4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 114:220758

REFERENCE 2: 112:159357

REFERENCE 3: 107:32715

REFERENCE 4: 105:6923

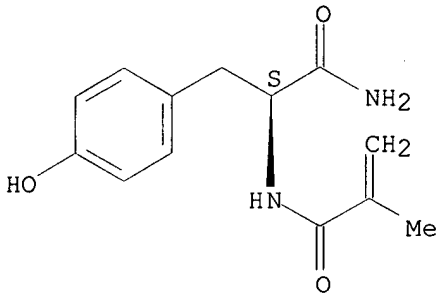
L21 ANSWER 31 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **100502-85-0** REGISTRY

CN Glycine, N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-, 4-nitrophenyl ester, polymer with (S)-4-hydroxy-.alpha.-[(2-methyl-1-oxo-2-propenyl)amino]benzenepropanamide and N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with (S)-4-hydroxy-.alpha.-[(2-methyl-1-oxo-2-propenyl)amino]benzenepropanamide and N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]glycine 4-nitrophenyl ester (9CI)
CN Benzenepropanamide, 4-hydroxy-.alpha.-[(2-methyl-1-oxo-2-propenyl)amino]-, (S)-, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide and N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]glycine 4-nitrophenyl ester (9CI)
FS STEREOSEARCH
MF (C14 H15 N3 O6 . C13 H16 N2 O3 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

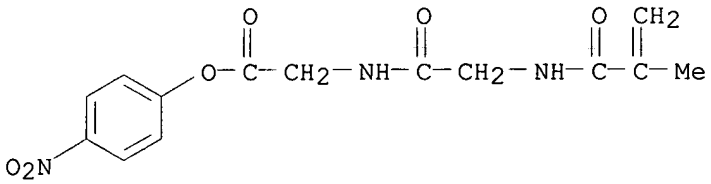
CRN 91147-51-2
CMF C13 H16 N2 O3

Absolute stereochemistry.



CM 2

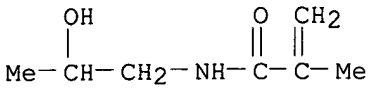
CRN 57950-79-5
CMF C14 H15 N3 O6



CM 3

CRN 21442-01-3

CMF C7 H13 N O2



9 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 112:83947

REFERENCE 2: 109:61366

REFERENCE 3: 109:327

REFERENCE 4: 108:11118

REFERENCE 5: 107:141105

REFERENCE 6: 106:207295

REFERENCE 7: 106:182546

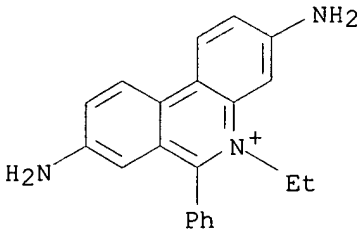
REFERENCE 8: 105:29893

REFERENCE 9: 104:95387

L21 ANSWER 32 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **100466-41-9** REGISTRY
CN Phenanthridinium, 3,8-diamino-5-ethyl-6-phenyl-, dimer with acridine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Acridine, dimer with 3,8-diamino-5-ethyl-6-phenylphenanthridinium (9CI)
MF (C21 H20 N3 . C13 H9 N)2
CI PMS
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

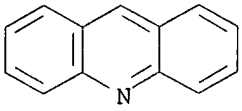
CM 1

CRN 3546-21-2
CMF C21 H20 N3



CM 2

CRN 260-94-6
CMF C13 H9 N



2 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 115:85398

REFERENCE 2: 104:141770

L21 ANSWER 33 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **100424-72-4** REGISTRY
CN Glycine, N-(2-methyl-1-oxo-2-propenyl)glycyl-L-phenylalanyl-L-leucyl-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-(2-methyl-1-oxo-2-propenyl)glycyl-L-phenylalanyl-L-leucylglycine 4-nitrophenyl ester (9CI)
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-[N-[N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-L-phenylalanyl]-L-leucyl]glycine 4-nitrophenyl ester
CN Glycine, N-[N-[N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-L-phenylalanyl]-L-leucyl]-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide
FS PROTEIN SEQUENCE; STEREOSEARCH
DR 175407-52-0, 193691-56-4, 251990-61-1
MF (C29 H35 N5 O8 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
SR CA
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

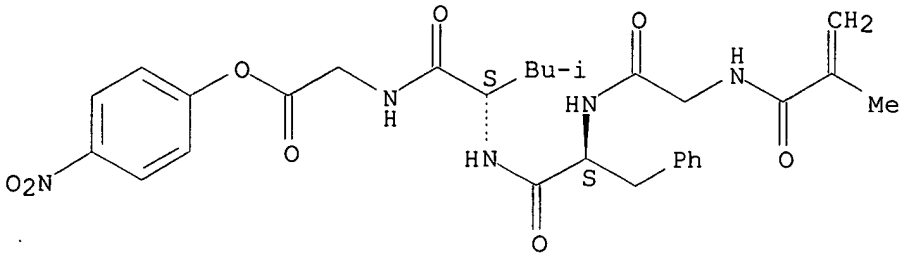
RELATED SEQUENCES AVAILABLE WITH SEQLINK

CM 1

CRN 100424-71-3
CMF C29 H35 N5 O8

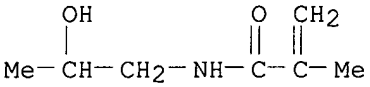
RELATED SEQUENCES AVAILABLE WITH SEQLINK

Absolute stereochemistry.



CM 2

CRN 21442-01-3
CMF C7 H13 N O2



42 REFERENCES IN FILE CA (1962 TO DATE)
34 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
42 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:371619

REFERENCE 2: 137:206318

REFERENCE 3: 136:345605

REFERENCE 4: 136:330425

REFERENCE 5: 136:172648

REFERENCE 6: 135:348808

REFERENCE 7: 135:93054

REFERENCE 8: 135:50981

REFERENCE 9: 135:10000

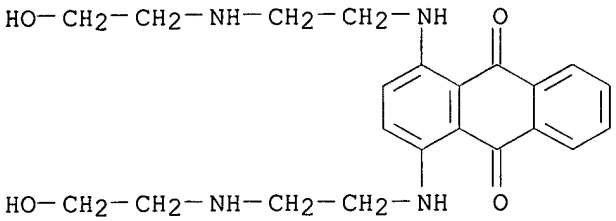
REFERENCE 10: 134:46793

L21 ANSWER 34 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-07-9** REGISTRY
CN Pentanedial, polymer with 1,4-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-, polymer with pentanedial (9CI)
MF (C22 H28 N4 O4 . C5 H8 O2)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Searched by M. Smith

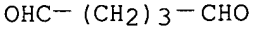
CM 1

CRN 64862-96-0
CMF C22 H28 N4 O4



CM 2

CRN 111-30-8
CMF C5 H8 O2



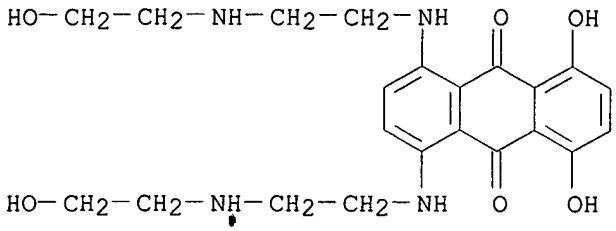
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 35 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-06-8** REGISTRY
CN 2,5-Furandicarboxaldehyde, polymer with 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-, polymer with 2,5-furandicarboxaldehyde (9CI)
MF (C22 H28 N4 O6 . C6 H4 O3)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, DRUGPAT, DRUGUPDATES, TOXCENTER, USPATFULL

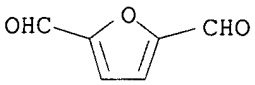
CM 1

CRN 65271-80-9
CMF C22 H28 N4 O6



CM 2

CRN 823-82-5
CMF C6 H4 O3



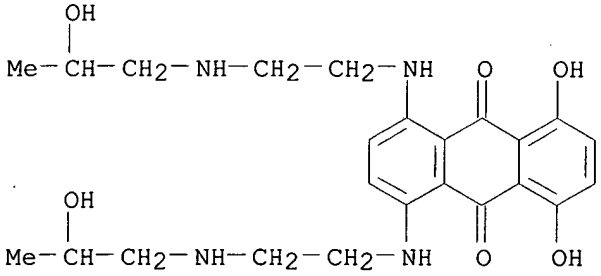
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 36 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-05-7** REGISTRY
CN Pentanedial, polymer with 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxypropyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxypropyl)amino]ethyl]amino]-, polymer with pentanedial (9CI)
MF (C24 H32 N4 O6 . C5 H8 O2)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

CRN 70788-93-1
CMF C24 H32 N4 O6



CM 2

CRN 111-30-8
CMF C5 H8 O2

OHC– $(CH_2)_3$ –CHO

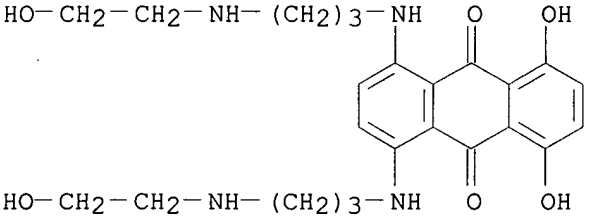
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 37 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-04-6** REGISTRY
CN 1,4-Benzenedicarboxaldehyde, polymer with 1,4-dihydroxy-5,8-bis[[3-[(2-hydroxyethyl)amino]propyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[3-[(2-hydroxyethyl)amino]propyl]amino]-, polymer with 1,4-benzenedicarboxaldehyde (9CI)
MF (C24 H32 N4 O6 . C8 H6 O2)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

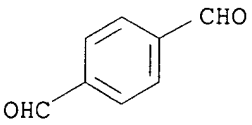
CM 1

CRN 73542-16-2
CMF C24 H32 N4 O6



CM 2

CRN 623-27-8
CMF C8 H6 O2



1 REFERENCES IN FILE CA (1962 TO DATE)

Searched by M. Smith

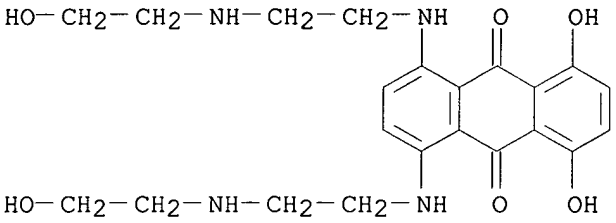
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 38 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-02-4** REGISTRY
CN 1,2-Benzenedicarboxaldehyde, 4-chloro-, polymer with 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-, polymer with 4-chloro-1,2-benzenedicarboxaldehyde (9CI)
MF (C22 H28 N4 O6 . C8 H5 Cl O2)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, DRUGPAT, DRUGUPDATES, TOXCENTER, USPATFULL

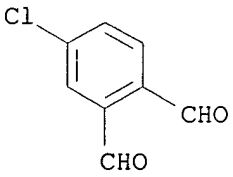
CM 1

CRN 65271-80-9
CMF C22 H28 N4 O6



CM 2

CRN 13209-31-9
CMF C8 H5 Cl O2



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

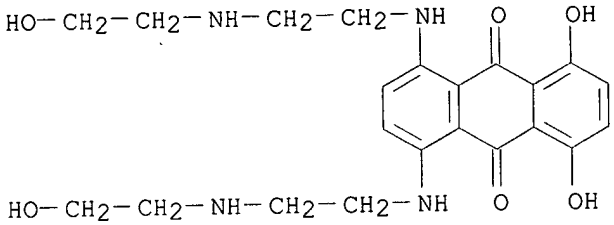
REFERENCE 1: 102:100802

L21 ANSWER 39 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-01-3** REGISTRY
CN 1,4-Benzenedicarboxaldehyde, polymer with 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-, polymer with 1,4-benzenedicarboxaldehyde (9CI)
MF (C22 H28 N4 O6 . C8 H6 O2)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

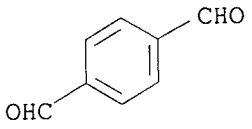
CM 1

CRN 65271-80-9
CMF C22 H28 N4 O6



CM 2

CRN 623-27-8
CMF C8 H6 O2



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

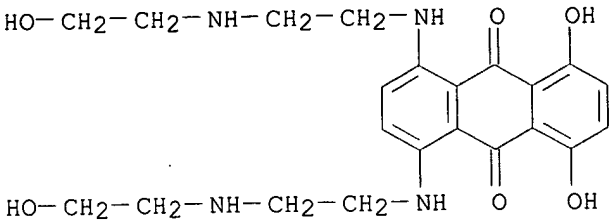
L21 ANSWER 40 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94798-00-2** REGISTRY
CN Pentanedial, polymer with 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-, polymer with pentanedial (9CI)
MF (C22 H28 N4 O6 . C5 H8 O2)x
CI PMS
PCT Polyother, Polyother only
LC STN Files: CA, CAPLUS, DRUGPAT, DRUGUPDATES, TOXCENTER, USPATFULL

CM 1

CRN 65271-80-9

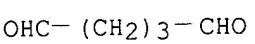
Searched by M. Smith

CMF C22 H28 N4 O6



CM 2

CRN 111-30-8
CMF C5 H8 O2



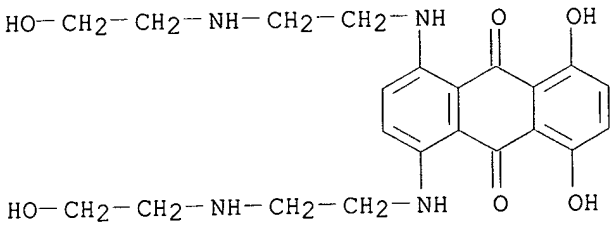
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 41 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-99-6** REGISTRY
CN Ethanedial, polymer with 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-9,10-anthracenedione (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 9,10-Anthracenedione, 1,4-dihydroxy-5,8-bis[[2-[(2-hydroxyethyl)amino]ethyl]amino]-, polymer with ethanedial (9CI)
MF (C22 H28 N4 O6 . C2 H2 O2)x
CI PMS
PCT Polyether, Polyether only
LC STN Files: CA, CAPLUS, DRUGPAT, DRUGUPDATES, TOXCENTER, USPATFULL

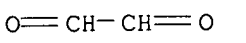
CM 1

CRN 65271-80-9
CMF C22 H28 N4 O6



CM 2

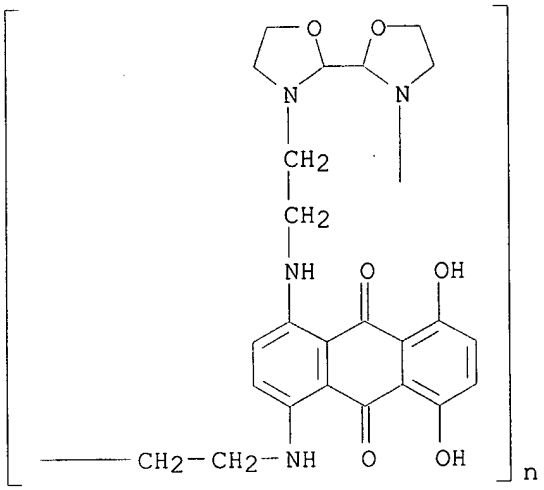
CRN 107-22-2
CMF C2 H2 O2



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

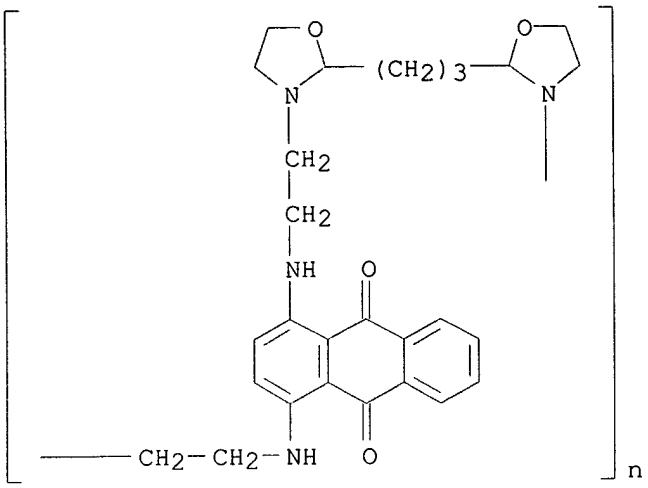
L21 ANSWER 42 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-89-4** REGISTRY
CN Poly[[2,2'-bioxazolidine]-3,3'-diyl-1,2-ethanediylimino(9,10-dihydro-5,8-dihydroxy-9,10-dioxo-1,4-anthracenediyl)imino-1,2-ethanediyl] (9CI) (CA INDEX NAME)
MF (C24 H26 N4 O6)n
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

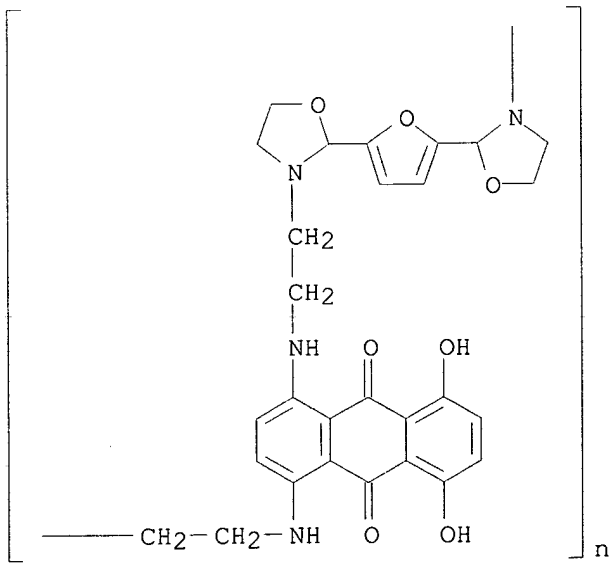
L21 ANSWER 43 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-88-3** REGISTRY
CN Poly[3,2-oxazolidinediyl-1,3-propanediyl-2,3-oxazolidinediyl-1,2-ethanediylimino(9,10-dihydro-9,10-dioxo-1,4-anthracenediyl)imino-1,2-ethanediyl] (9CI) (CA INDEX NAME)
MF (C27 H32 N4 O4)n
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 44 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-87-2** REGISTRY
CN Poly[3,2-oxazolidinediyl-2,5-furandiyl-2,3-oxazolidinediyl-1,2-ethanediylimino(9,10-dihydro-5,8-dihydroxy-9,10-dioxo-1,4-anthracenediyl)imino-1,2-ethanediyl] (9CI) (CA INDEX NAME)
MF (C28 H28 N4 O7)n
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

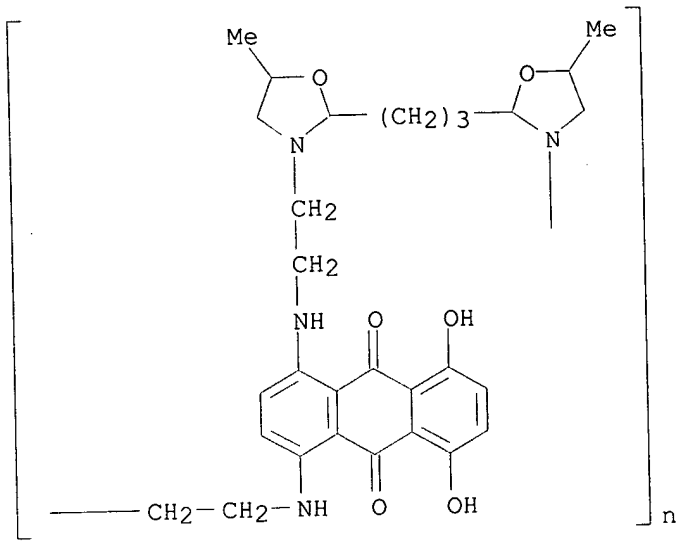


Searched by M. Smith

1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 45 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-86-1** REGISTRY
CN Poly[(5-methyl-3,2-oxazolidinediyl)-1,3-propanediyl(5-methyl-2,3-oxazolidinediyl)-1,2-ethanediylimino(9,10-dihydro-5,8-dihydroxy-9,10-dioxo-1,4-anthracenediyl)imino-1,2-ethanediyl] (9CI) (CA INDEX NAME)
MF (C29 H36 N4 O6)n
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

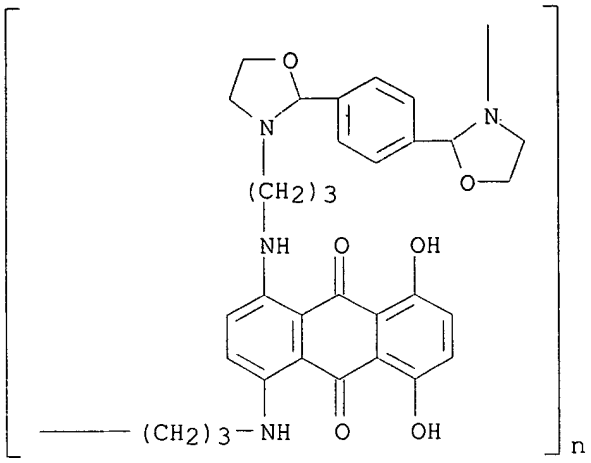


1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 46 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-85-0** REGISTRY
CN Poly[3,2-oxazolidinediyl-1,4-phenylene-2,3-oxazolidinediyl-1,3-propanediylimino(9,10-dihydro-5,8-dihydroxy-9,10-dioxo-1,4-anthracenediyl)imino-1,3-propanediyl] (9CI) (CA INDEX NAME)
MF (C32 H34 N4 O6)n
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

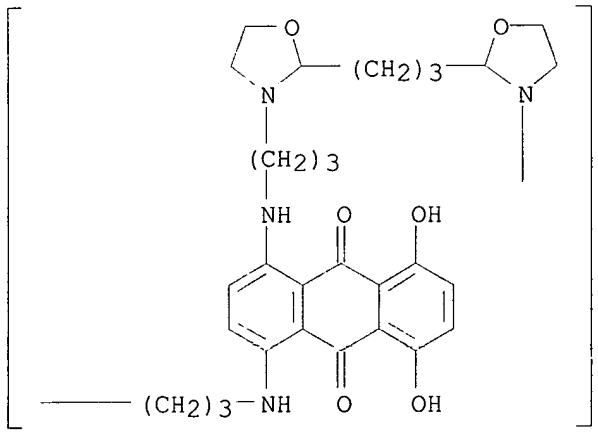
Searched by M. Smith



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

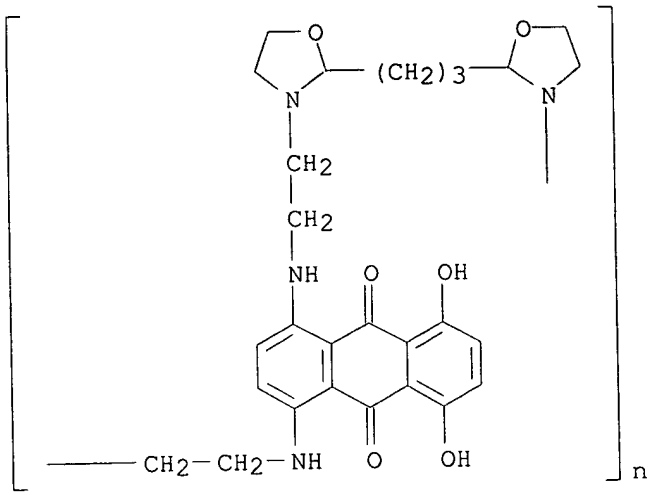
L21 ANSWER 47 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **94797-84-9** REGISTRY
CN Poly[3,2-oxazolidinediyl-1,3-propanediyl-2,3-oxazolidinediyl-1,3-propanediylimino(9,10-dihydro-5,8-dihydroxy-9,10-dioxo-1,4-anthracenediyl)imino-1,3-propanediyl] (9CI) (CA INDEX NAME)
MF (C29 H36 N4 O6)n
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL



1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 102:100802

L21 ANSWER 48 OF 69 REGISTRY COPYRIGHT 2002 ACS



3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 108:205

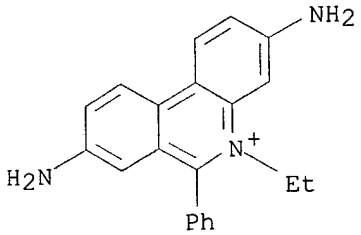
REFERENCE 2: 104:82042

REFERENCE 3: 102:100802

L21 ANSWER 50 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **89160-73-6** REGISTRY
CN Phenanthridinium, 3,8-diamino-5-ethyl-6-phenyl-, dimer (9CI) (CA INDEX NAME)
MF (C21 H20 N3)2
CI PMS
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

CM 1

CRN 3546-21-2
CMF C21 H20 N3



4 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 115:85398

Searched by M. Smith

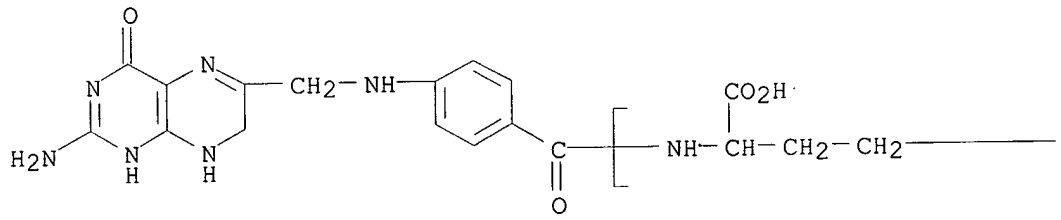
REFERENCE 2: 110:130668

REFERENCE 3: 104:141770

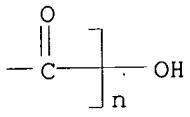
REFERENCE 4: 100:117036

L21 ANSWER 51 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **87404-63-5** REGISTRY
CN Poly[imino(1-carboxy-4-oxo-1,4-butanediyl)], .alpha.-[4-[[(2-amino-1,4,7,8-tetrahydro-4-oxo-6-pteridinyl)methyl]amino]benzoyl]-.omega.-hydroxy-, (S)- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Dihydrofolic acid polyglutamate
MF (C5 H7 N O3)n C14 H14 N6 O3
CI PMS
PCT Polyamine
LC STN Files: CA, CAPLUS, TOXCENTER

PAGE 1-A



PAGE 1-B



4 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 115:105586

REFERENCE 2: 113:126149

REFERENCE 3: 113:17614

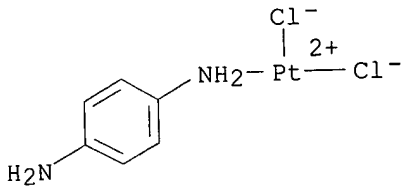
REFERENCE 4: 106:15470

L21 ANSWER 52 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **82385-25-9** REGISTRY
CN Platinum, (1,4-benzenediamine-N)dichloro-, homopolymer (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:

CN 1,4-Benzenediamine, platinum complex, homopolymer
MF (C6 H8 Cl2 N2 Pt)x
CI PMS
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 82385-24-8
CMF C6 H8 Cl2 N2 Pt
CCI CCS

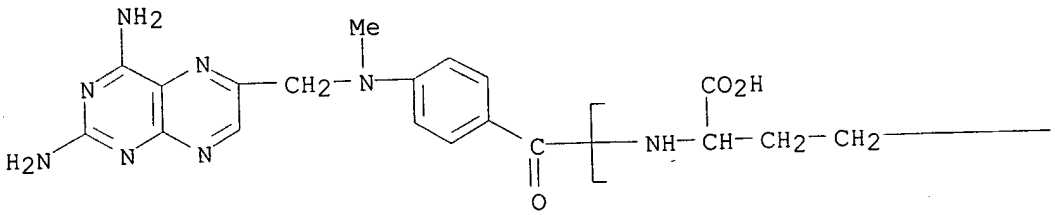


1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 97:49382

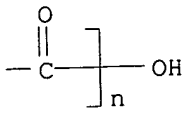
L21 ANSWER 53 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **82334-40-5** REGISTRY
CN Poly[imino[(1S)-1-carboxy-4-oxo-1,4-butanediyl]], .alpha.-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Poly[imino(1-carboxy-4-oxo-1,4-butanediyl)], .alpha.-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-.omega.-hydroxy-, (S)-
OTHER NAMES:
CN Methotrexate polyglutamate
DR 88504-05-6
MF (C5 H7 N O3)n C15 H15 N7 O2
CI PMS
PCT Polyamine
LC STN Files: ADISNEWS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, EMBASE, MEDLINE, TOXCENTER

PAGE 1-A



Searched by M. Smith

PAGE 1-B



95 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
95 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:195162

REFERENCE 2: 136:334885

REFERENCE 3: 136:63557

REFERENCE 4: 134:50968

REFERENCE 5: 133:344276

REFERENCE 6: 132:146279

REFERENCE 7: 131:193912

REFERENCE 8: 130:150825

REFERENCE 9: 130:278

REFERENCE 10: 128:303745

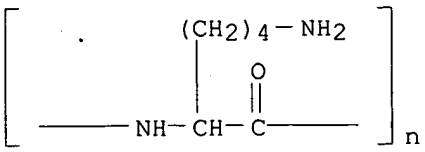
L21 ANSWER 54 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **78729-90-5** REGISTRY
CN L-Glutamic acid, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, compd. with (S)-poly[imino[1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]] (1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Poly[imino[1-(4-aminobutyl)-2-oxo-1,2-ethanediyl]], (S)-, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamate (1:1) (9CI)
FS STEREOSEARCH
MF C20 H22 N8 O5 . (C6 H12 N2 O)n
PCT Polyamide
LC STN Files: CA, CAPLUS, TOXCENTER

RELATED POLYMERS AVAILABLE WITH POLYLINK

CM 1

CRN 38000-06-5
CMF (C6 H12 N2 O)n
CCI PMS

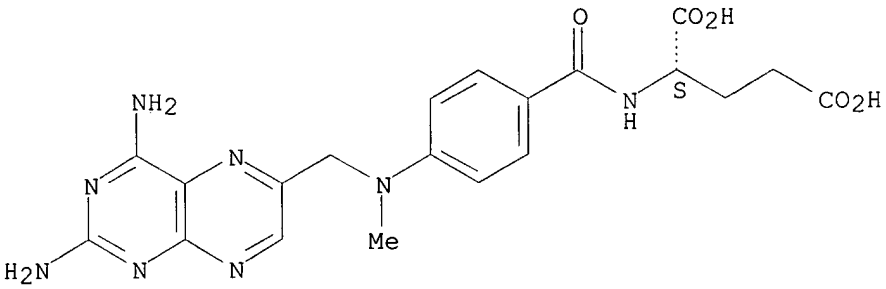
Searched by M. Smith



CM 2

CRN 59-05-2
CMF C20 H22 N8 O5

Absolute stereochemistry.



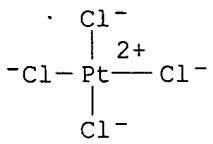
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 95:90846

L21 ANSWER 55 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **76033-48-2** REGISTRY
CN Platinate(2-), tetrachloro-, dipotassium, (SP-4-1)-, polymer with 1,4-benzenediamine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,4-Benzenediamine, polymer with dipotassium (SP-4-1)-tetrachloroplatinate(2-) (9CI)
MF (C6 H8 N2 . Cl4 Pt . 2 K)x
CI PMS
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

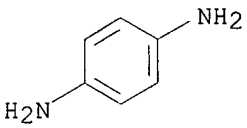
CRN 10025-99-7 (13965-91-8)
CMF Cl4 Pt . 2 K
CCI CCS



●2 K^+

CM 2

CRN 106-50-3
CMF C6 H8 N2



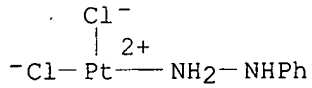
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 94:16146

L21 ANSWER 56 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **71534-03-7** REGISTRY
CN Platinum, dichloro(phenylhydrazine-N2)-, homopolymer, stereoisomer (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Hydrazine, phenyl-, platinum complex, homopolymer
MF (C6 H8 Cl2 N2 Pt)x
CI PMS
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 71534-02-6
CMF C6 H8 Cl2 N2 Pt
CCI CCS



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

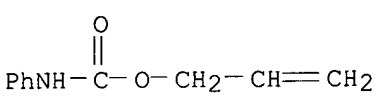
REFERENCE 1: 100:185405

REFERENCE 2: 91:168350

L21 ANSWER 57 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **70956-79-5** REGISTRY
CN 2-Propenoic acid, polymer with 2-propenyl phenylcarbamate (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Carbamic acid, phenyl-, 2-propenyl ester, polymer with 2-propenoic acid (9CI)
MF (C10 H11 N O2 . C3 H4 O2)x
CI PMS
PCT Polyacrylic, Polyvinyl
LC STN Files: CA, CAPLUS, TOXCENTER

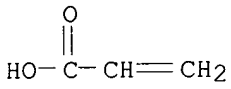
CM 1

CRN 18992-89-7
CMF C10 H11 N O2



CM 2

CRN 79-10-7
CMF C3 H4 O2



2 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 93:221301

REFERENCE 2: 91:57853

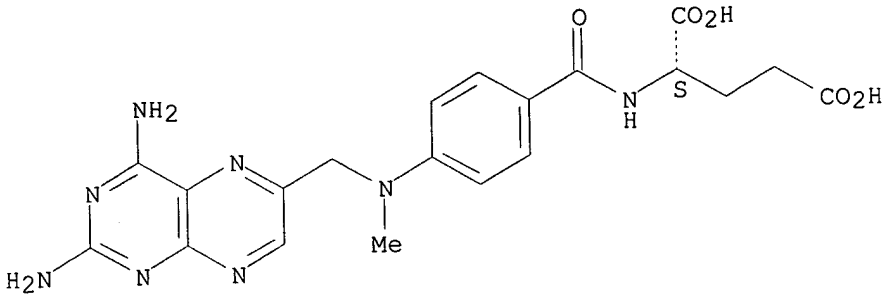
L21 ANSWER 58 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **68378-41-6** REGISTRY
CN L-Glutamic acid, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-, compd. with L-lysine homopolymer (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN L-Lysine, homopolymer, N-[4-[[(2,4-diamino-6-pteridinyl)methyl]methylamino]benzoyl]-L-glutamate (9CI)
FS STEREOSEARCH
DR 80973-82-6
MF C20 H22 N8 O5 . x (C6 H14 N2 O2)x
PCT Polyamide, Polyamide formed
LC STN Files: BIOTECHNO, CA, CANCERLIT, CAPLUS, EMBASE, MEDLINE, TOXCENTER

RELATED POLYMERS AVAILABLE WITH POLYLINK

CM 1

CRN 59-05-2
CMF C20 H22 N8 O5

Absolute stereochemistry.



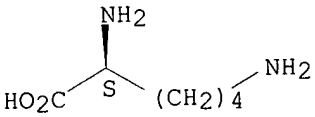
CM 2

CRN 25104-18-1
CMF (C6 H14 N2 O2)x
CCI PMS

CM 3

CRN 56-87-1
CMF C6 H14 N2 O2

Absolute stereochemistry.



4 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 100:333

REFERENCE 2: 96:155134

REFERENCE 3: 95:90846

REFERENCE 4: 89:220823

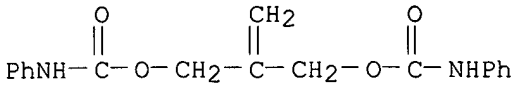
L21 ANSWER 59 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **68045-72-7** REGISTRY
CN 2,5-Furandione, polymer with 2-methylene-1,3-propanediyl bis(phenylcarbamate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Propanediol, 2-methylene-, bis(phenylcarbamate), polymer with 2,5-furandione (9CI)
MF (C18 H18 N2 O4 . C4 H2 O3)x

Searched by M. Smith

CI PMS, COM
PCT Polyvinyl
LC STN Files: CA, CAPLUS, TOXCENTER

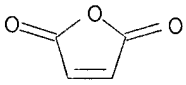
CM 1

CRN 68045-70-5
CMF C18 H18 N2 O4



CM 2

CRN 108-31-6
CMF C4 H2 O3



3 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 93:221301

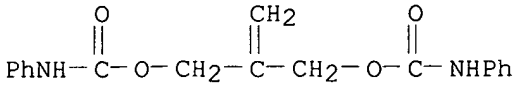
REFERENCE 2: 91:57853

REFERENCE 3: 90:661

L21 ANSWER 60 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **68045-71-6** REGISTRY
CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 2-methylene-1,3-propanediyl bis(phenylcarbamate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Propanediol, 2-methylene-, bis(phenylcarbamate), polymer with 1-ethenyl-2-pyrrolidinone (9CI)
MF (C18 H18 N2 O4 . C6 H9 N O)x
CI PMS
PCT Polyvinyl
LC STN Files: CA, CAPLUS, TOXCENTER

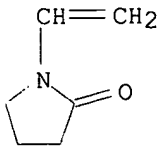
CM 1

CRN 68045-70-5
CMF C18 H18 N2 O4



CM 2

CRN 88-12-0
CMF C6 H9 N O



3 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 93:221301

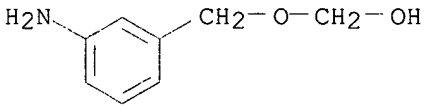
REFERENCE 2: 91:57853

REFERENCE 3: 90:661

L21 ANSWER 61 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **65879-82-5** REGISTRY
CN Dextran, [(3-aminophenyl)methoxy]methyl ether (9CI) (CA INDEX NAME)
OTHER NAMES:
CN m-Aminobenzyloxymethyldextran
MF C8 H11 N O2 . x Unspecified
PCT Manual registration
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 167613-68-5
CMF C8 H11 N O2



CM 2

CRN 9004-54-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
9 REFERENCES IN FILE CA (1962 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 103:100875

REFERENCE 2: 102:181532

REFERENCE 3: 97:138171

REFERENCE 4: 97:16781

REFERENCE 5: 97:2836

REFERENCE 6: 93:109756

REFERENCE 7: 90:99241

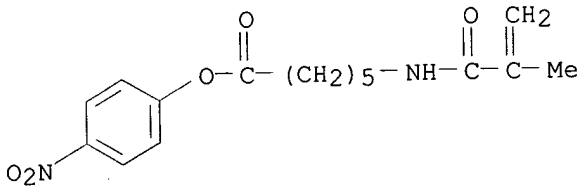
REFERENCE 8: 89:44116

REFERENCE 9: 88:115178

L21 ANSWER 62 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **64129-75-5** REGISTRY
CN Hexanoic acid, 6-[(2-methyl-1-oxo-2-propenyl)amino]-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with 4-nitrophenyl 6-[(2-methyl-1-oxo-2-propenyl)amino]hexanoate (9CI)
OTHER NAMES:
CN N-(2-Hydroxypropyl)methacrylamide-4-nitrophenyl 6-methacryloylaminocaproate copolymer
MF (C16 H20 N2 O5 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

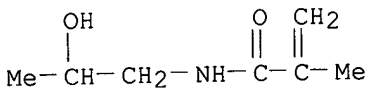
CM 1

CRN 57950-59-1
CMF C16 H20 N2 O5



CM 2

CRN 21442-01-3
CMF C7 H13 N O2



Searched by M. Smith

20 REFERENCES IN FILE CA (1962 TO DATE)
14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
20 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:299744

REFERENCE 2: 125:241817

REFERENCE 3: 120:237613

REFERENCE 4: 117:14410

REFERENCE 5: 114:25060

REFERENCE 6: 112:57255

REFERENCE 7: 110:135868

REFERENCE 8: 108:187393

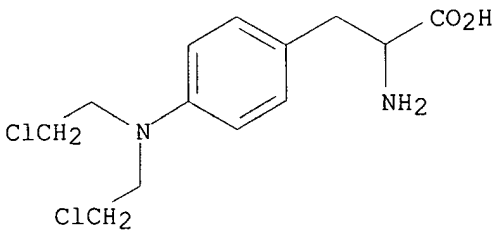
REFERENCE 9: 105:120592

REFERENCE 10: 104:34423

L21 ANSWER 63 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **62586-24-7** REGISTRY
CN Phenylalanine, 4-[bis(2-chloroethyl)amino]-, monohydrochloride, compd. with 4-ethenylpyridine homopolymer (1:1) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN DL-Phenylalanine, 4-[bis(2-chloroethyl)amino]-, monohydrochloride, compd. with 4-ethenylpyridine homopolymer (1:1)
CN Pyridine, 4-ethenyl-, homopolymer, compd. with 4-[bis(2-chloroethyl)amino]-DL-phenylalanine monohydrochloride (1:1)
CN Pyridine, 4-ethenyl-, homopolymer, compd. with 4-[bis(2-chloroethyl)amino]phenylalanine monohydrochloride (1:1) (9CI)
MF C13 H18 Cl2 N2 O2 . (C7 H7 N)x . Cl H
PCT Polyvinyl
LC STN Files: CA, CAPLUS, TOXCENTER

CM 1

CRN 1465-26-5 (531-76-0)
CMF C13 H18 Cl2 N2 O2 . Cl H



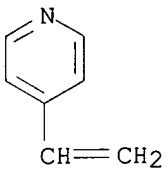
HCl

CM 2

CRN 25232-41-1
CMF (C7 H7 N)x
CCI PMS

CM 3

CRN 100-43-6
CMF C7 H7 N



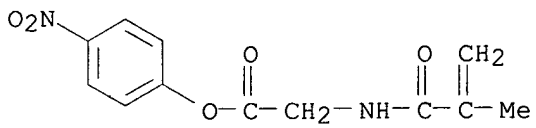
1 REFERENCES IN FILE CA (1962 TO DATE)
1 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 86:150519

L21 ANSWER 64 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **62238-85-1** REGISTRY
CN Glycine, N-(2-methyl-1-oxo-2-propenyl)-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-(2-methyl-1-oxo-2-propenyl)glycine 4-nitrophenyl ester (9CI)
OTHER NAMES:
CN (2-Hydroxypropyl)methacrylamide-methacryloylglycine 4-nitrophenyl ester copolymer
CN N-(2-Hydroxypropyl)methacrylamide-N-methacryloylglycine 4-nitrophenyl ester copolymer
DR 136508-97-9
MF (C12 H12 N2 O5 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

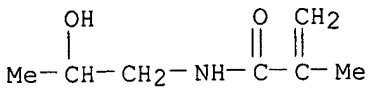
CM 1

CRN 57982-58-8
CMF C12 H12 N2 O5



CM 2

CRN 21442-01-3
CMF C7 H13 N O2



27 REFERENCES IN FILE CA (1962 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
27 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:299744

REFERENCE 2: 133:63763

REFERENCE 3: 132:269950

REFERENCE 4: 130:276739

REFERENCE 5: 129:127064

REFERENCE 6: 128:235044

REFERENCE 7: 127:162389

REFERENCE 8: 119:241370

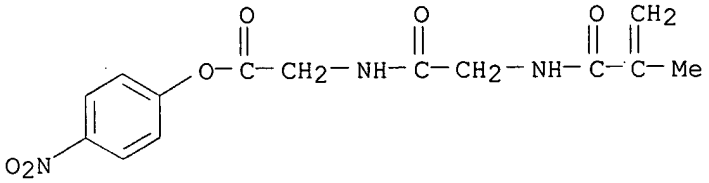
REFERENCE 9: 117:14410

REFERENCE 10: 115:189568

L21 ANSWER 65 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **57950-81-9** REGISTRY
CN Glycine, N-(2-methyl-1-oxo-2-propenyl)glycyl-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-(2-methyl-1-oxo-2-propenyl)glycylglycine 4-nitrophenyl ester (9CI)
CN 2-Propenamide, N-(2-hydroxypropyl)-2-methyl-, polymer with N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]glycine 4-nitrophenyl ester
CN Glycine, N-[N-(2-methyl-1-oxo-2-propenyl)glycyl]-, 4-nitrophenyl ester, polymer with N-(2-hydroxypropyl)-2-methyl-2-propenamide
OTHER NAMES:
CN (2-Hydroxypropyl)methacrylamide-methacryloyldiglycine 4-nitrophenyl ester copolymer
CN N-(2-Hydroxypropyl)methacrylamide-N-methacryloylglycylglycine 4-nitrophenyl ester copolymer
DR 138024-91-6, 160836-46-4, 175407-54-2, 176222-78-9
MF (C14 H15 N3 O6 . C7 H13 N O2)x
CI PMS
PCT Polyacrylic
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL

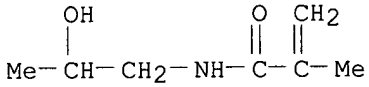
CM 1

CRN 57950-79-5
CMF C14 H15 N3 O6



CM 2

CRN 21442-01-3
CMF C7 H13 N O2



63 REFERENCES IN FILE CA (1962 TO DATE)
48 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
63 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:329356

REFERENCE 2: 137:315913

REFERENCE 3: 137:299744

REFERENCE 4: 137:190518

REFERENCE 5: 137:165385

REFERENCE 6: 136:345605

REFERENCE 7: 136:330426

REFERENCE 8: 136:330421

REFERENCE 9: 136:4358

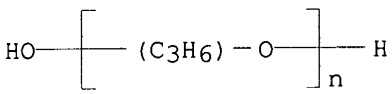
REFERENCE 10: 135:348808

L21 ANSWER 66 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **51231-75-5** REGISTRY
CN 1,2-Ethanediamine, polymer with .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzene, 1,1'-methylenebis[4-isocyanato-, polymer with 1,2-ethanediamine and .alpha.-hydro-.omega.-hydroxypoly[oxy(methyl-1,2-ethanediyl)] (9CI)
CN Poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,2-ethanediamine and 1,1'-methylenebis[4-isocyanatobenzene] (9CI)

OTHER NAMES:
CN 1,2-Ethanediamine-methylenebis(4-phenyl isocyanate)-polypropylene glycol polymer
CN 4,4'-Diphenylmethane diisocyanate-ethylenediamine-polypropylene glycol copolymer
CN Ethylene diamine-4,4'-methylenebis(phenyl isocyanate)-poly(propylene oxide) copolymer
CN Ethylenediamine-MDI-polypropylene glycol copolymer
CN Ethylenediamine-methylenebis(4-phenyl isocyanate)-poly(propyleneglycol)copolymer
CN Ethylenediamine-methylenebis(4-phenyl isocyanate)-polypropylene glycol polymer
CN Ethylenediamine-methylenedi-p-phenylene isocyanate-polypropylene glycol copolymer
CN PU 1025
DR 51096-29-8
MF (C15 H10 N2 O2 . (C3 H6 O)n H2 O . C2 H8 N2)x
CI PMS, COM
PCT Polyether, Polyurea, Polyurea formed, Polyurethane, Polyurethane formed
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

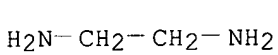
CM 1

CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



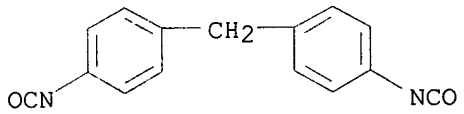
CM 2

CRN 107-15-3
CMF C2 H8 N2



CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



53 REFERENCES IN FILE CA (1962 TO DATE)
5 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
53 REFERENCES IN FILE CAPLUS (1962 TO DATE)

Searched by M. Smith

REFERENCE 1: 137:370846

REFERENCE 2: 134:212654

REFERENCE 3: 128:193607

REFERENCE 4: 126:344376

REFERENCE 5: 122:64260

REFERENCE 6: 122:38698

REFERENCE 7: 118:154497

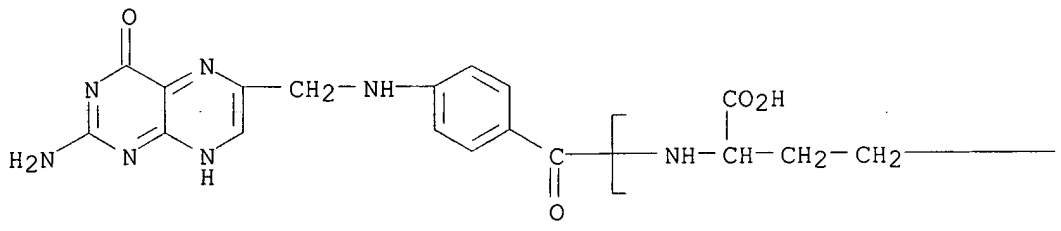
REFERENCE 8: 118:109437

REFERENCE 9: 117:239750

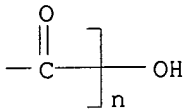
REFERENCE 10: 116:181060

L21 ANSWER 67 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **32108-06-8** REGISTRY
CN Poly[imino[(1S)-1-carboxy-4-oxo-1,4-butanediyl]], .alpha.-[4-[[(2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl]amino]benzoyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Poly[imino(1-carboxy-4-oxo-1,4-butanediyl)], .alpha.-[4-[[(2-amino-1,4-dihydro-4-oxo-6-pteridinyl)methyl]amino]benzoyl]-.omega.-hydroxy-, (S)-
CN Poly[iminocarbonyl(3-carboxytrimethylene)], .alpha.-(1,3-dicarboxypropyl)-.omega.-[p-[[(2-amino-4-hydroxy-6-pteridinyl)methyl]amino]benzamido]- (8CI)
OTHER NAMES:
CN Folate polyglutamate
CN Pteroyloligoglutamate
MF (C5 H7 N O3)n C14 H12 N6 O3
CI PMS
PCT Polyamine
LC STN Files: AGRICOLA, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, TOXCENTER, USPATFULL

PAGE 1-A



PAGE 1-B



77 REFERENCES IN FILE CA (1962 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
77 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:154310

REFERENCE 2: 136:291224

REFERENCE 3: 135:90519

REFERENCE 4: 134:125646

REFERENCE 5: 131:166866

REFERENCE 6: 131:41824

REFERENCE 7: 131:15562

REFERENCE 8: 130:281253

REFERENCE 9: 129:170207

REFERENCE 10: 129:62537

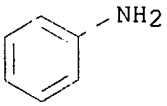
L21 ANSWER 68 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **25233-30-1** REGISTRY
CN Benzenamine, homopolymer (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Aniline, polymers (8CI)
OTHER NAMES:
CN Aniline homopolymer
CN Aniline polymer
CN Anirido
CN Corrpassiv 4900
CN Corrpassiv 4901
CN Ormecon
CN PASS 01
CN Polyaniline
CN Polyemeraldine
CN Polyphenyleneamine
CN Skippers Corrpassiv
CN Versicon
CN XICP 0501
DR 105961-05-5, 241824-47-5
MF (C6 H7 N)x
CI PMS, COM
PCT Polyamine, Polyamine formed

Searched by M. Smith

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CIN, CSCHEM, EMBASE, MEDLINE, NIOSHTIC, PIRA, PROMT, TOXCENTER, TULSA, USPAT2, USPATFULL, VTB

CM 1

CRN 62-53-3
CMF C6 H7 N



7813 REFERENCES IN FILE CA (1962 TO DATE)
608 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
7822 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:378656

REFERENCE 2: 137:378499

REFERENCE 3: 137:377937

REFERENCE 4: 137:377856

REFERENCE 5: 137:373043

REFERENCE 6: 137:372593

REFERENCE 7: 137:372452

REFERENCE 8: 137:371447

REFERENCE 9: 137:371128

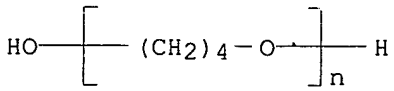
REFERENCE 10: 137:370738

L21 ANSWER 69 OF 69 REGISTRY COPYRIGHT 2002 ACS
RN **9018-04-6** REGISTRY
CN 1,4-Butanediol, polymer with .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl) and 1,1'-methylenebis[4-isocyanatobenzene] (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzene, 1,1'-methylenebis[4-isocyanato-, polymer with 1,4-butanediol and .alpha.-hydro-.omega.-hydroxypoly(oxy-1,4-butanediyl) (9CI)
CN Isocyanic acid, methylene-p-phenylene ester, polymer with 1,4-butanediol and tetramethylene glycol (8CI)
CN Poly(oxy-1,4-butanediyl), .alpha.-hydro-.omega.-hydroxy-, polymer with 1,4-butanediol and 1,1'-methylenebis[4-isocyanatobenzene] (9CI)
OTHER NAMES:
CN 1,4-Butanediol-4,4'-diphenylmethane diisocyanate-poly(tetramethylene glycol) polymer
CN 1,4-Butanediol-4,4'-diphenylmethane diisocyanate-polyoxytetramethylene glycol copolymer
CN 1,4-Butanediol-4,4'-diphenylmethane diisocyanate-polytetramethylene ether glycol copolymer

CN 1,4-Butanediol-4,4'-diphenylmethane diisocyanate-polytetramethylene oxide copolymer
CN 1,4-Butanediol-4,4'-diphenylmethane diisocyanate-polyfurit copolymer
CN 1,4-Butanediol-4,4'-MDI-polyoxytetramethylene glycol copolymer
CN 1,4-Butanediol-4,4'-methylenebis(isocyanatobenzene)-polytetramethylene glycol copolymer
CN 1,4-Butanediol-4,4'-methylenebis(phenyl isocyanate)-polytetramethylene glycol copolymer
CN 1,4-Butanediol-diphenylmethane 4,4'-diisocyanate-polytetramethylene glycol copolymer
CN 1,4-Butanediol-diphenylmethane diisocyanate-poly(tetrahydrofuran) copolymer
CN 1,4-Butanediol-diphenylmethane diisocyanate-polytetramethylene glycol copolymer
CN 1,4-Butanediol-MDI-poly(tetramethylene oxide) copolymer
CN 1,4-Butanediol-MDI-polytetramethylene glycol copolymer
CN 1,4-Butanediol-MDI-PTMG copolymer
CN 1,4-Butanediol-methylenebis(4-phenylisocyanate)-polytetramethylene glycol polymer
CN 1,4-Butanediol-methylenedi-p-phenylene diisocyanate-polytetramethylene glycol polymer
CN 1,4-Butanediol-methylenedi-p-phenylene isocyanate-polytetramethylene ether glycol copolymer
CN 1,4-Butanediol-methylenedi-p-phenylene isocyanate-polytetramethylene glycol polymer
CN 1,4-Butanediol-polytetramethylene ether glycol-4,4'-diphenylmethane diisocyanate copolymer
CN 1,4-Butanediol-polytetramethylene glycol-4,4'-diphenylmethane diisocyanate polymer
CN 1,4-Butylene glycol-MDI-poly(oxytetramethylene) glycol copolymer
CN Butanediol-diphenylmethane diisocyanate-polyfurit copolymer
CN Deerfield PT 6100S
CN Duraflex PT 6100S
CN Halthane 73-14
CN Halthane 73-15
CN Mitec HE 2005
CN Poly(tetramethylene glycol)-1,4-butanediol-4,4'-diphenylmethane diisocyanate polymer
CN PU 4
CN TPU 3BT
DR 172345-22-1, 51161-17-2, 67775-11-5, 74665-51-3, 77752-34-2, 80702-01-8
MF (C15 H10 N2 O2 . C4 H10 O2 . (C4 H8 O)n H2 O)x
CI PMS, COM
PCT Polyether, Polyurethane, Polyurethane formed
LC STN Files: BIOSIS, CA, CAPLUS, CHEMCATS, CHEMLIST, IFICDB, IFIPAT, IFIUDB, MSDS-OHS, PROMT, TOXCENTER, USPATFULL
Other Sources: DSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

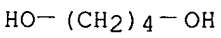
CM 1

CRN 25190-06-1
CMF (C4 H8 O)n H2 O
CCI PMS



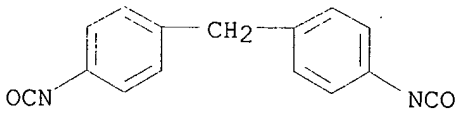
CM 2

CRN 110-63-4
CMF C4 H10 O2



CM 3

CRN 101-68-8
CMF C15 H10 N2 O2



417 REFERENCES IN FILE CA (1962 TO DATE)
24 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
417 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:155453

REFERENCE 2: 136:402971

REFERENCE 3: 136:233016

REFERENCE 4: 134:281957

REFERENCE 5: 134:281725

REFERENCE 6: 134:179727

REFERENCE 7: 134:101365

REFERENCE 8: 134:57580

REFERENCE 9: 134:18162

REFERENCE 10: 133:336051

Searched by M. Smith